

CALIFORNIA STATE JOURNAL OF MEDICINE

RESOLUTION ON MEDICAL ETHICS



SOLICITATION of patients by physicians as individuals, or collectively in groups by whatsoever name these may be called, or by institutions or organizations, whether by circulars or advertisements, or by personal communications, is unprofessional. That does not prohibit ethical institutions from a legitimate advertisement of location, physical surroundings and special class—if any—of patients accommodated. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession, and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physician, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not per se improper. As implied, it is unprofessional to disregard local customs and offend recognized ideals in publishing or circulating such cards.

"It is unprofessional to promote radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of disease; or to employ any methods to gain the attention of the public for the purpose of obtaining patients."—(*Abstract from Minutes of the Seventy-third Annual Session of the A. M. A.*)

SEPTEMBER • 1922

Vol. XX. No. 9

\$4.00 a Year, Single Copies 35 Cents

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA
Entered at San Francisco, California, as Second-Class Matter

BALBOA BLDG., SECOND AND MARKET STS., SAN FRANCISCO

EDITOR AND SECRETARY W. E. MUSGRAVE, M. D.

ASSOCIATE SECRETARY H. H. JOHNSON

MANAGING EDITOR CELESTINE J. SULLIVAN

SUPERINTENDENT OF PUBLICATIONS WILLIAM H. BARRY

MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

H. G. BRAINERD, Los Angeles.....	President	W. W. CROSS, Fresno.....	Second Vice-Pres.
T. C. EDWARDS, Salinas.....	President-Elect	W. E. MUSGRAVE, San Francisco.....	Secretary-Editor
PERCY T. MAGAN, Los Angeles.....	First Vice-Pres.	HOWARD H. JOHNSON.....	Associate Secretary

COUNCILORS

FIRST DISTRICT — San Diego, Riverside, Orange, San Bernardino and Imperial Counties.

P. M. CARRINGTON, San Diego
(Term expires 1924)

SECOND DISTRICT—Los Angeles, Santa Barbara, Ventura and Kern Counties.

WM. H. KIGER, Los Angeles
(Term expires 1925)

THIRD DISTRICT — San Luis Obispo and Monterey Counties.

GARTH PARKER, Salinas
(Term expires 1923)

FOURTH DISTRICT — Fresno, Kings, Tuolumne, Merced, Mariposa, Madera and Stanislaus Counties.

FRED R. DE LAPPE, Modesto
(Term expires 1925)

FIFTH DISTRICT — Santa Clara, San Mateo, San Benito and Santa Cruz Counties.

F. H. PATERSON, San Jose
(Term expires 1923)

SIXTH DISTRICT—San Francisco County.

C. G. KENYON, San Francisco,
Chairman
(Term expires 1925)

COUNCILORS AT LARGE—

O. D. Hamlin, Oakland (term expires 1925); René Elme, San Francisco (term expires 1923); Geo. H. Kress, Los Angeles (term expires 1923); Wm. T. McArthur, Los Angeles (term expires 1923); Saxton T. Pope, San Francisco (term expires 1924); C. Van Zwalenburg, Riverside (term expires 1923).

SEVENTH DISTRICT — Alameda, Contra Costa, San Joaquin and Calaveras Counties.

EDW. N. EWER, Oakland
(Term expires 1923)

EIGHTH DISTRICT—Sacramento, Amador, El Dorado, Alpine, Placer, Nevada, Yuba, Sutter, Sierra, Yolo, Butte, Plumas, Lassen, Mono, Inyo, Glenn, Colusa, Tehama, Shasta, Modoc and Siskiyou Counties.

J. H. PARKINSON, Sacramento
(Term expires 1925)

NINTH DISTRICT — Marin, Sonoma, Lake, Mendocino, Solano, Napa, Del Norte, Humboldt and Trinity Counties.

JAMES H. McLEOD, Santa Rosa
(Term expires 1923)

September Contents

Recent Developments in Radiotherapy. By Rex Duncan, M. D.	291
Gastro-Intestinal Complications Accompanying Pulmonary Tuberculosis. By Wm. C. Voorsanger, M. D.	295
Amoebic Abscess of the Liver. By H. J. Brown, M. D.	298
Diagnosis and Treatment of Gall Bladder Disease (Part II). By W. C. Alvarez, M. D.	299
Chronic Suppurative Parotitis with Acute Exacerbations. By H. J. Profant.	301
Why Medical Social Service Deserves a Place in Hospital Organization and the Duties of Medical Social Workers toward Hospital Administration. By F. R. Nuzum, M. D.	303
Observations on the Cardiovascular System in Thyroid Disease. By Wm. J. Kerr, M. D., and George C. Hensel, M. D.	306
Studies in Ureteral Catheterization; Preliminary Report. By H. A. R. Kreutzmann, M. D.	310
Treatment of Hyperemesis Gravidarum. By G. Carl H. McPheeters, M. D.	311

Editorials:

New Offices of State Society.....	316
The Physician and "Privileged Communications"	316

State Society:

Codification of Constitution and By-Laws California Medical Association.	317
---	-----

County News:

Alameda	320
Butte	320
Glenn	320
Kern	320
Los Angeles	320
Marin	320
San Diego	321
San Francisco	321
San Mateo	321
Santa Barbara	321
Santa Clara	321
Stanislaus	321
Tuolumne	321
Yolo	322

Business and the Busy Physician.....	322
Pacific Coast Association of Anesthetists—Minutes of First Scientific Session.....	323
Pharmacology and Therapeutics.....	324

California State Journal of Medicine

OWNED AND PUBLISHED MONTHLY BY THE MEDICAL SOCIETY OF THE STATE OF CALIFORNIA

BALBOA BUILDING, SECOND AND MARKET STREETS, SAN FRANCISCO

Editor and Secretary	- - - - -	W. E. MUSGRAVE, M. D.
Associate Secretary	- - - - -	HOWARD H. JOHNSON, M. D.
Managing Editor	- - - - -	CELESTINE J. SULLIVAN
Superintendent of Publications	- - - - -	WILLIAM H. BARRY

VOL. XX

SEPTEMBER, 1922

No. 9

ORIGINAL ARTICLES

RESPONSIBILITY FOR STATEMENTS AND CONCLUSIONS IN ORIGINAL ARTICLES

The author of an article appearing in the JOURNAL is entirely responsible for all statements and conclusions. These may or may not be in harmony with the views of the editorial staff. Furthermore, authors are largely responsible for the language and method of presenting their subjects. All manuscripts will be carefully read, but editorial privileges will be exercised only to a very limited extent. It is believed that the manner of presentation of any subject by any author determines to no small degree the value of his conclusions. Therefore, both the author and the reader, in our opinion, are entitled to have the subject as presented by the author as little disturbed as possible by the editors. However, the right to reduce or reject any article is always reserved.

RECENT DEVELOPMENTS IN RADIO- THERAPY.*

By REX DUNCAN, M. D., Los Angeles, Cal.
(From the Radium and Oncologic Institute.)

Radiotherapy, or the treatment of diseases by means of radiation, is based upon the fact that certain histological and bio-chemical changes are produced in the body tissues by rays capable of penetrating the tissues. This effect varies with the character, quality and quantity of radiation applied, and may be stimulating or destructive. All tissues are affected, but there is a hyper-susceptibility of neoplastic or newly formed tissues. Generally speaking, the resistance is greater the more nearly the newly formed tissues histologically resemble normal, and a proportionately greater susceptibility in the more rapid growing and less perfectly formed types. However, a wide variation in susceptibility of tissues has been noted by all careful observers, and was further demonstrated by careful research conducted by Wood, demonstrating quite conclusively that it is impossible to establish a so-called lethal dose for cancer.

The histological changes that occur have been carefully studied by ourselves and numerous observers. We have, for some time, been grading our tumors according to the grouping suggested

by A. C. Broders, and noting their susceptibility. This work, which will be published in detail later, gives a more comprehensive understanding of the biological effect of irradiation and suggests certain improvements in technique and the possibility of a more definite prognosis. The precise cause of these histological changes due to irradiation has not been determined. Whether or not it is due to the direct effect of the radiation on the neoplastic elements or secondary to the changes produced in the normal tissues, or a systemic effect or a combination of these and other changes, is a matter for further research. That destructive changes do occur in certain types of neoplasms consistent with the dosage and technique employed, is a well-established fact.

The rapid development and excellent results obtained with radium therapy have been due largely to the fact that with radium we possess a constant and definite source of energy and a very thorough understanding of its physical properties. The mechanical and physical problems of X-ray equipment have recently been developed to the point where we now have equipment, both machines and tubes, capable of operating under high voltage, and means of accurately measuring at all times the voltage employed. The character and quality of X-rays produced are dependent upon the voltage passing through the X-ray tube. The greater the voltage employed, the larger quantity of short-wave length or more highly penetrating rays produced, the intensity increasing as the square of the voltage.

Modern deep X-ray therapy has been made possible by the physicist and electrical engineer, who, through scientific research, have given us, first, Roentgen ray tubes, which will stand very high voltage continuously, and, second, the development of electrical apparatus which would generate safely high voltages with great reliability and safety from breakdown, and, third, physical measurements which enable us with certain technique to know quite accurately the character and quantity of radiation, and the percentage and distribution of intensity at various depths within the body.

The several factors governing the quantity and quality of the therapeutic application of X-rays are the type of equipment employed, the voltage, milamperage, screen or filter, skin distance, port of entry and time. Varying these factors, Des-sauer, by elaborate physical researches, compiled

* Read before the New Mexico Medical Society, April 23, 1922, at Gallup, New Mexico; also before the California State Medical Society, at Yosemite, May 15, 1922.

certain tables, showing the distribution of intensity or intensity curves at various depths within the body.

Table 1 is based upon research of Dessauer and Coolidge, and is applicable to our equipment and technique, and shows, with various voltages, the percentage of intensity absorbed superficially or within the first cm. of tissue and that reaching 10 cm. in depth after filtering through from 0.5 mm. to 1.33 mm. of copper, employing a 25 cm. port and 50 cm. skin distance.

The biological or therapeutic value of deep X-ray therapy is dependent upon our ability to produce a sufficient and homogenous radiation of

to measure or calibrate the patient and draw on a piece of glass, film or transparent paper, a cross-section of the patient, outlining accurately as previously determined by examination, the areas of involvement and probable metastasis or extension of the disease. It is then possible to work out a technique of treatment that will enable us to apply the desired percentage of intensity to each area, and properly record same. While this requires considerable work in each case, it permits of a very accurate and scientific radiation, and prevents routine methods with their pernicious faults. The exact dosage and technique must be based upon the general physical condition of the patient, character

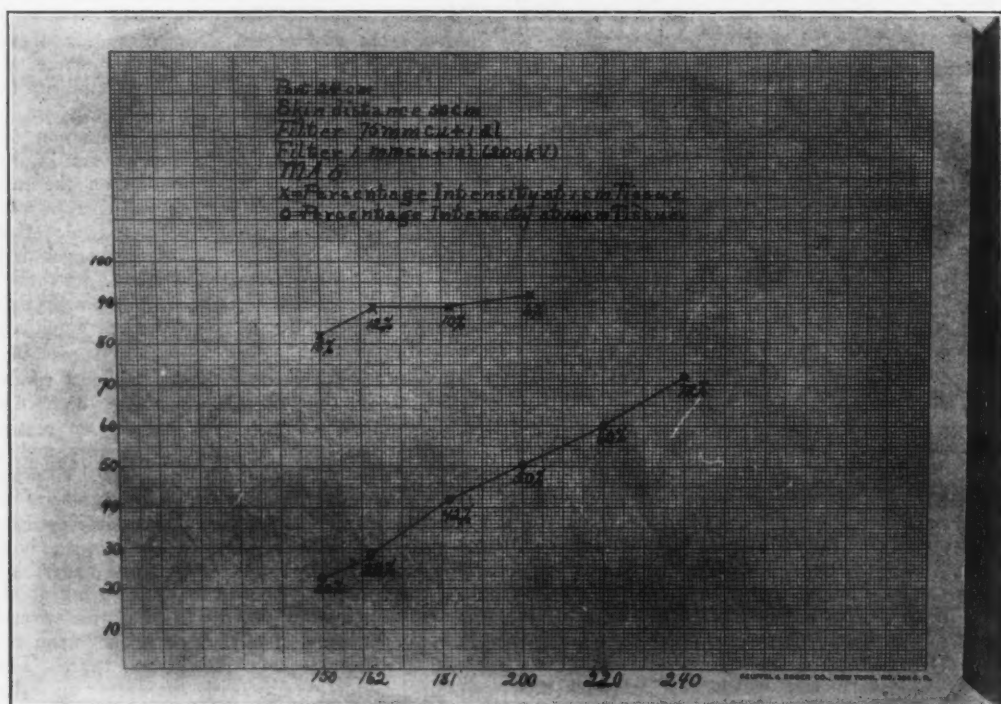


Figure 1

deep tissues, without destruction of the skin and intervening areas, and without too great toxæmia or systemic effect. The amount of systemic radiation is proportionately diminished with higher voltage, heavy screening and a lesser number of ports employed.

Figures 2 and 3 represent Dessauer charts, showing the curves and percentage of intensity at various tissue depths, employing 150,000 volts and 200,000 volts, and other factors as shown. The distribution of intensity with various voltages up to 300,000 volts under conditions practical for their therapeutic application, have been worked out principally by Dessauer, Coolidge and Wilson. With the necessary apparatus and the proper application of these physical facts, it is possible to evolve a technique by means of which the desired amount of radiation may be placed at practically any point within the body.

In our work we have found it most satisfactory

and location of the involvement, and the histopathology of the neoplasm.

Clinical and experimental observations of the effect of deep X-ray upon the constituents of the blood show diminution in red cells, with corresponding reduction in hemoglobin. For several hours following irradiation there is a neutrophilic leukocytosis, followed by a leukopenia, with particularly striking diminution in the number of lymphocytes. Cases with a marked anemia should not be subjected to vigorous X-ray treatment until the blood picture has been improved.

The biological dosage of X-ray is dependent upon many factors previously referred to, and will require extensive observation and research.

The actual technique as employed in the European clinics varies greatly. There is, however, an unanimity of opinion on two essentials for intensive X-ray therapy; apparatus which can deliver at least 200,000 volts and the employment of

heavy filters. Fortunately, our American-made apparatus is capable of working satisfactorily at 200,000 volts and over, with means of accurately determining the voltage employed. Our technique is improved by the use of higher voltage and amperage and a consequent shortening of the time of treatment required to give the same amount of deep radiation. While there are various details that modify the actual technique of treatment, the desired amount of radiation may be applied at practically any point in the average patient through two ports of entry with a total of two to four hours' time. The total dosage is given, as a rule, in one or two treatments, though this will vary

radiation are reported by J. & S. Ratera, and others.

Deep X-ray therapy has been employed in European clinics largely for the treatment of deep-seated malignancies and the results reported have been consistently encouraging. Stern, in an article entitled, "Extensive X-ray Therapy as Seen Practiced in the Clinics of Europe," after reviewing somewhat in detail the technique employed in various clinics, states: "As to the choice of cases in most of the clinics I visited, I found that they had practically discontinued operating on all cases of carcinoma of the breast and the uterus. They claim that the results with irradiation alone are

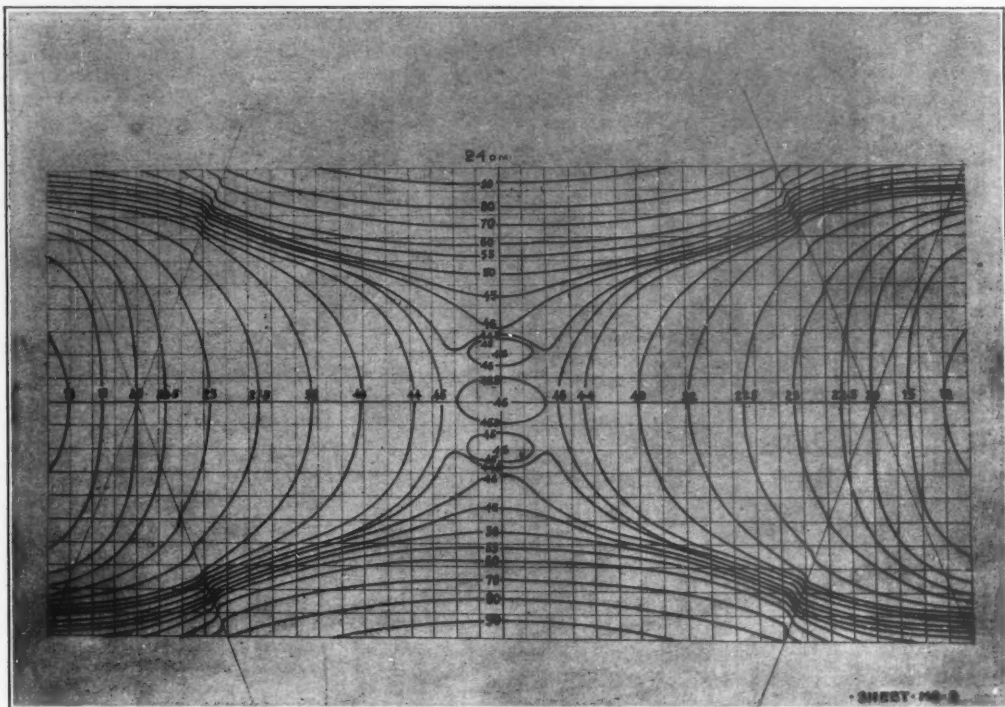


Figure 2—Chart showing distribution of intensity employing 150 k. v. plus .75 cu. plus 1 mm. al. at 50 cm. distance. 24 cm. port.

with the constitutional condition of the patient. We have observed a marked decrease in the percentage of cases showing nausea and other symptoms of constitutional disturbances since employing 200,000 volts and 5 to 8 milamperes than resulted with the previous technique.

Inasmuch as the cancer cells apparently develop a resistance to small repeated doses of X-ray or radium, it is essential that the lethal or cancer doses be administered in the shortest possible time.

Harot and Truchot report a high percentage of apparent cures of carcinoma and sarcoma treated with massive doses, and failures in patients where repeated small doses were employed. This later method is to be condemned and should be replaced by a systematic use of high doses of penetrating rays. Similar results regarding the relative effect of small repeated doses and intense

far superior and that they get approximately 85 per cent of cures, including all classes of cases taken at random. They were all very emphatic on the importance of never treating any type of sarcoma surgically, as the chances of metastasis are much increased by any surgical interference."

X-ray therapy with high voltage has been extended to new groups of non-malignant conditions. Hjalmas Eiken reports prompt healing in the treatment of deep purulent wounds, and favorable results in the treatment of surgical tuberculosis and carefully selected pulmonary causes are also reported by F. Jessen, Mr. M. Bechters and others.

James T. Case, whose work with high voltage equipment antedates by nearly a year that of all other workers in this country, states that high penetrating X-rays have advantage over radium for deep application, although radium will be

more in demand for use in tumors and in cavities of the body. He states that the immediate results in certain cases have been startlingly encouraging.

While our work is too recent to justify conclusions, the changes occurring and the results obtained in the treatment of a large number of benign and malignant conditions are very encouraging, and in certain cases, the immediate results have been most striking.

Relief of pain in several advanced pelvic cases has been most marked. One case of pelvic carcinoma that had been taking five grains of morphine per day, stopped voluntarily in 48 hours after the treatment was completed. Several cases of ad-

and post-operative treatment of cancer, and we are now employing deep X-ray therapy as routine in combination with radium emanation in all cases of uterine cancer and for the treatment of regional lymphatics, following the local use of radium emanation in intra-oral malignancies; also in all inoperable breast cancers and intra-abdominal malignancies, as well as in hyperthyroidism, and other appropriate conditions.

Radiotherapy, particularly by means of radium emanation, will continue to occupy a large and superior place in the treatment of a certain group of benign and malignant conditions. However, the large volume of high penetrating X-rays pro-

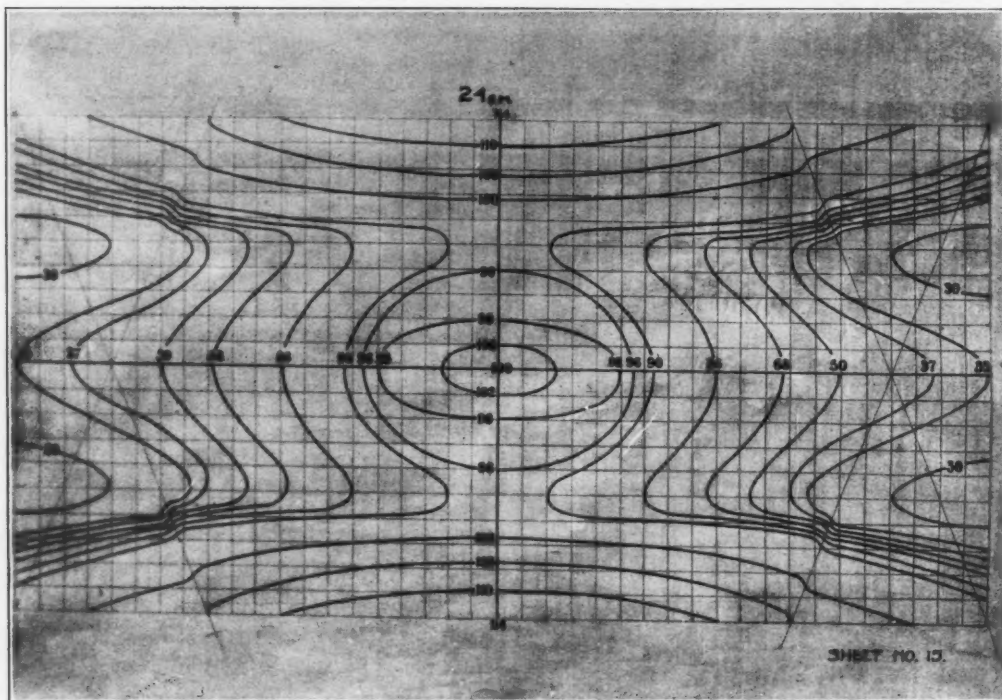


Figure 3—Chart showing distribution of intensity employing 200 k. v. filter 1 mm. cu. plus 1 mm. al. at 50 cm. distance. 24 cm. port.

vanced inoperable carcinoma of the breast have shown marked absorption in the tumor mass and the regional lymphatics, with a consequent decrease in the swelling of the arm, and relief of pain. One case of extensive rectal carcinoma treated with combined radium and deep X-ray has shown a total absorption of the tumor mass in less than one month following treatment. Another case of large palpable tumor found inoperable at exploratory laparotomy has shown a marked reduction in size of the tumor and the patient has regained appetite, strength and weight. There are numerous other cases that have shown quite a marked immediate effect. I do not wish to be misunderstood, and fully appreciate that these cases may ultimately die a cancer death, but the palliation well justifies treatment and offers a faint possibility of cure in a small percentage at least. We feel that deep X-ray should always be used in the pre-

duced with high voltage has a broad application and greatly increases the scope of radiotherapy.

With adequate facilities for both radium emanation therapy and high voltage X-ray therapy available, it is possible to offer palliation in practically all cases of malignancy, and the percentage of ultimate cures will undoubtedly be increased. The new high voltage or deep X-ray therapy technique is upon a distinctly scientific basis, and must supersede all previous methods of X-ray therapy.

The full value of radium and X-ray therapy will not be obtained until the radiologist is consulted by the internist and the surgeon before operation, and as a consultant, given an opportunity to earlier co-operation in the selection and treatment of that large group of cases in which radiotherapy offers superior results.

GASTRO-INTESTINAL COMPLICATIONS ACCOMPANYING PULMONARY TUBERCULOSIS*

By WILLIAM C. VOORSANGER, M. D., San Francisco
(From the Oaks Sanitarium, Los Gatos, Calif.)

Good food constitutes one of the main therapeutic measures in the treatment of pulmonary tuberculosis. This does not mean, as was at one time erroneously assumed, that a tuberculous patient should be overfed and crowded beyond his capacity with large quantities of milk, eggs and cereals in addition to his regular meals. It does mean that he should have a properly regulated diet, including milk and eggs, sufficient to bring his weight to normal and restore his bodily strength and energy. However, adequate feeding of a tuberculous patient is often a practical impossibility, due to the numerous gastric and intestinal conditions, organic and particularly functional, which result as a direct concomitant of his pulmonary disease.

These problems will be analyzed as:

Functional—Loss of appetite; disgust for certain kinds of foods or for all foods; vagaries of diet; distress after eating, i. e., gas; nausea and vomiting (intestinal toxemia); coughing during eating; abdominal pain (gastralgia—diaphragmatic pleurisy); result of over-eating; diarrhoea.

Treatment—Particularly the combating of anorexia and the control of increased peristalsis by the use of intravenous injections of 5 per cent calcium chloride.

Organic—Gastric or duodenal ulcer; colitis; appendicitis; intestinal tuberculosis (differential diagnosis).

In pulmonary tuberculosis, symptoms referable to the stomach or intestine are exceedingly common. Mohler and Funk in 1000 consecutive cases found 64.6 per cent had gastric symptoms; Hutchinson in 72 per cent; Janowski 35 per cent, and Landis 55.3 per cent. These percentages are mainly for functional disturbances because actual tuberculosis of the stomach is almost unknown, occurring only twice in 2000 autopsies performed at the Brompton Hospital, London. Pulmonary tuberculosis causes a definite downward progression in gastric motility and secretory function. Hyperacidity is rare. The gastric mucosa and glands may be impaired, thus causing gastric disorders. Undoubtedly, in pulmonary tuberculosis we have delayed digestion which may produce symptoms as the primary disease progresses. Pulmonary disease often has a gastric onset, and every patient complaining of prolonged anorexia or gastric distress should have a complete physical and roentgenological examination to ascertain if pulmonary tuberculosis is present.

Tuberculosis is unquestionably a disease dependent upon lowered resistance. To arrest it, resistance must be elevated, and unless the patient will eat this is unobtainable and our best methods of treatment futile. Child nutrition is being ap-

proached from the point of view of the child being an entity because his digestion differs from the adult. We may go further and assert that adult digestions differ one from the other and that each under-nourished adult is a separate entity. In feeding a tuberculous patient, particularly one who complains of loss of appetite, his particular psychology must be considered. What were his habits before he became ill? What are his idiosyncrasies and prejudices? We base all diets on the proper relation of carbohydrates to proteins, but must not this rate differ in different individuals according to occupation and temperament? Again, how great a role the nervous system must play in its relation to digestion! Prolonged indigestion causes loss of weight and strength and diminished resistance. A proper or effective blood circulation must play an important role also in digestion and the patient's desire for food. Nutrition from the cellular point of view is intimately bound up with the idea of a normal or abnormal increase or decrease in the digestive power of the individual cell. As the end products of gastric and intestinal digestion are transmitted to the cells of the body by the plasma it is manifest that metabolism is influenced by good or defective circulation. We are wont to accept "loss of appetite" in a tuberculous patient as a natural symptom of his disease produced by a general toxemia and treat it with tonics with forced feeding, the latter often causing vomiting or nausea. Loss of appetite is often due to toxemia, but is just as often due to temperamental peculiarities, nervous symptoms or defective circulation.

A worrysome functional disturbance often more difficult to combat than anorexia, is a "disgust for certain kinds or for all foods." Patients who formerly had been hearty eaters often complain that they can no longer eat meat because the odor of it kills their appetites. Others state that although they feel like eating, they know that if they took food they would vomit, although the food did not distress them.

Such patients continue to lose weight until they are taught to overcome these peculiarities. Vagaries of diet are met with only too often in handling tuberculous patients. Common examples are those who cannot drink milk nor eat soft-boiled eggs; who will discard a whole tray because sauce was poured over the meat; who will not eat chicken; or who can only eat one kind of cereal. In fact, instances of freakishness in eating common in the healthy individual can be multiplied manyfold in the chronically sick. Nor is the condition easy to combat, since in tuberculosis our aim is hypernutrition. The very articles of food most necessary for the latter are refused in a foolish and stubborn belief that the patient cannot tolerate them. Patients who receive narcotics often take violent dislikes to the most easily digested foods.

Nausea and vomiting are the most frequent gastric or intestinal symptoms. They may be due to high temperature or to intestinal toxemia, but more often to excessive coughing, swallowing of sputum, or the clinging of tenacious sputum to the pharynx, which causes gagging and vomiting.

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May 18, 1922.

Swallowing of sputum plays an important role in the continuation and aggravation of disordered gastric function. It may best be combated by instructing the patient never to swallow his sputum. The drinking of a glass of hot water fifteen minutes before eating, particularly before breakfast, proves often most efficacious in loosening bits of tenacious sputum and counteracting the coughing and subsequent vomiting which often occurs after the first few mouthfuls of food. Pottenger explains nausea and vomiting as an expression of increased muscular tonus in the gastric walls through visceral reflexes. However we explain nausea and vomiting, it is an ever-present complication and often prevents the patient's up-building. Closely allied to nausea and vomiting is coughing during eating, which often induces the former. Many patients cough upon the slightest pharyngeal irritation—and the swallowing of food seems to particularly excite a pharyngeal reflex. Sometimes this coughing will not occur until the meal is completed, but whenever it occurs often expectoration and vomiting follow. If the vomiting occurs with every meal, nourishment of the patient naturally becomes a great problem. A small dose of Heroin or Codein fifteen minutes before meal time may be beneficial. Patients often develop a "habit" cough and exercise this particularly while eating. This cough can be controlled by teaching the patient to inspire when he feels the pharyngeal "tickle."

Abdominal pain is one of the most distressing symptoms seen in the course of pulmonary tuberculosis. Its causes are numerous. Certain articles of food may cause it, particularly milk. Acute epigastric pain suggestive of gastric ulcer may cease immediately after the removal of milk from the patient's dietary. A few days later the milk may be resumed without the patient feeling any distress. Eggs often have similar effect. Overeating is one of the frequent causes of epigastric pain. Excessive amounts of raw fruit also may cause violent abdominal pain. Increased peristalsis is a natural result of dietetic indiscretion—hence the necessity of making each patient a dietetic study and not feeding everyone alike or according to a fixed system. One patient may assimilate 3,500 calories daily—another may thrive and gain weight on 2,500. The greatest problem with which we have to deal is the patient himself. He believes the success of treatment depends upon cramming himself with food, particularly excessive amounts of milk and eggs, and if pain results he does not attribute it to overeating or wrong food, but to intestinal tuberculosis. It is often most difficult to convince him to the contrary.

Diaphragmatic pleurisy may cause abdominal pain, but treatment of pleurisy by aspirin and strapping will give relief. Pain in the region of the gall-bladder may suggest disease of this organ. Whereas the vast majority of all abdominal pain in the gastric or intestinal region is produced by temperamental idiosyncrasies or dietetic indiscretions, we must not forget that we may have organic causes such as gastric ulcer, appendicitis or intestinal tuberculosis. Appendicitis of tuber-

culous origin or otherwise is a condition which must always be kept in mind in acute abdominal pain.

Diarrhea, so frequently coincident with pain in the abdomen, is sometimes of organic origin, but more often it is due to dietary indiscretion. No combination of symptoms will so upset the patient's equilibrium and cause discouragement as diarrhea and pain. He has, of course, heard or read that these are cardinal symptoms of intestinal tuberculosis, and it often may take all one's tact to persuade him otherwise. To accomplish prompt relief of the condition is, of course, the best argument. When milk is the cause it should be stopped for one or more days. If it is due to intestinal toxemia, irritation of the gastric or intestinal mucosa or even a slight tuberculous ulceration, a 5 per cent solution of calcium chloride intravenously is useful. An initial dose of two cc. seems best. After four to five days, if no result is apparent, a dose of five cc. may be given and repeated weekly if required. Sometimes the immediate effect of the treatment is brilliant, the pain and diarrhea ceasing in twenty-four hours. This applies principally to cases of functional disturbances with little or no organic involvement. In one patient with marked intestinal tuberculosis accompanied by severe pain and diarrhea the symptoms disappeared within twenty-four hours after the injection. He eventually died, but for months previously he received considerable comfort from injections from one to three weeks apart. Calcium chloride very probably operates through inhibition of peristalsis, and of course its action is purely palliative. The author of the treatment maintains that relief is always obtained in the absence of excessive intestinal ulceration. Its value is great principally in cases of stubborn pain and diarrhea when definite cessation of these symptoms will convince the patient that his condition is not hopeless.

There is no more important problem than the determination of the status of a tuberculous patient with abdominal symptoms. Edward Archibald makes a plea for early recognition and surgical treatment of true tuberculous involvement of the intestine. He states "when a patient complains of pain in the mid or lower abdomen at irregular intervals during the day, but chiefly in the late forenoon or afternoon, these pains being crampy of stabbing, aggravated by food and relieved by fasting, felt only during a part of the day, then one must be very suspicious of tuberculosis. When he has loss of appetite—real distaste for food; when he has nausea at times; when he gives up one article of food after another; when he develops a slight fever which is not attributed to his lung condition, and if this persists over three or four weeks—then one may be almost sure of the diagnosis." Archibald is correct in urging an early diagnosis of true intestinal tuberculosis, because surgery offers a result in a percentage of these cases and temporary relief in the majority. I have seen the symptom complex detailed above as being pathognomic of intestinal tuberculosis disappear permanently under rest and

proper diet. In this event it was no doubt caused by functional disturbances or faulty diet.

In determining our diagnosis we should never forget that the tuberculous patient may develop the same abdominal conditions as the non-tuberculous patient, i. e., gastric or duodenal ulcer, gall-bladder disease, colitis or acute appendicitis. The differential diagnosis of these conditions from tuberculosis is not always easy—particularly as one hesitates to submit a patient with pulmonary involvement to an operation. We are often confronted with the problem of whether we are dealing with a diaphragmatic pleurisy or gall-bladder disease; whether an epigastric pain persisting is due to gas or an ulcer; whether a colitis is toxic, infectious or tuberculous; whether pain in the right lower abdominal quadrant is due to appendicitis or not. In the last named, blood examination will often clear the diagnosis except in the sub-acute forms. It is necessary to keep all these conditions in mind, when a patient with pulmonary tuberculosis develops abdominal symptoms, particularly since the latter may be independent of his tuberculous condition, which even more complicates the picture.

Fluoroscopy may be of some assistance in making a diagnosis in intestinal tuberculosis. Pirie, who did the roentgenological work for Archibald, states: "In a tuberculous subject with symptoms suggesting tuberculous caecum, if the caecum did not fill from four to twelve hours after the barium meal, when examined at intervals of about half an hour, then the want of filling confirms the diagnosis." In the few cases which I have fluoroscoped I have never been able to obtain positive evidence.

The decision as to whether the abdominal symptom complex is functional, due to diet, or whether it is organic, is important, because if the last named surgery becomes necessary. This paper cannot go into the surgery of intestinal tuberculosis. The results are occasionally permanent in the early mild ulcerative type of colitis, but in most cases they are palliative. It is my belief that the patient with pulmonary involvement should be given every possible chance with conservative methods before submitting him to a radical surgical procedure. Above all things, his pulmonary lesions must not be too far advanced if he is to submit to an operation for intestinal tuberculosis.

CONCLUSIONS

This brief paper does not attempt to present any new complications of tuberculosis. It is an analysis of certain practical problems which are worrisome and at times difficult of solution in the feeding of tuberculous patients.

The majority of gastric and intestinal symptoms in patients suffering from pulmonary tuberculosis are most probably due to toxemia, functional disturbances, dietary indiscretions or temperamental peculiarities.

Gastric tuberculosis per se is very rare, and intestinal tuberculosis, except in advanced cases, should only be diagnosed after most careful in-

vestigation and giving the patient the benefit of the doubt. Where definite intestinal tuberculosis has been absolutely verified, surgery may prove palliative.

It is most important to study the psychology of every patient—to recognize that adult digestions differ, and not attempt to feed patients by any fixed rule, but to carefully differentiate and individualize.

In abdominal pain and diarrhea calcium chloride 5 per cent injected intravenously is of considerable benefit.

The Problem of the Medical Parasite—The charge that the practice of medicine is not an exact science has been permitted to go unchallenged for so long that the statement has come to be generally accepted as true. Medicine is entitled to be called a science, and much of it exact science. The facts of anatomy are fixed and constant. Pathology is almost as constant as anatomy. Chemistry and physics are everywhere regarded as sciences. Bacteriology is as exact as botany, and botany is certainly entitled to rank with the other subdivisions of the great comprehensive science of biology. There is nothing in human experience that is entitled without reserve to be called exact—not even mathematics.

Most of the States have fairly good medical laws, but through most of them runs a common weakness—a section containing a list of "exemptions."

Under this heading will be found such medical parasites as have been legalized by indirect means. The problem of the medical parasite is peculiar to our own country. No other political subdivision of the civilized world gives legal sanction to the exploitation of its sick. One searches in vain through the medical laws of the nations of the earth sufficiently advanced to have medical laws, for any parallel to the desecration of medical law that prevails in our own United States of America. The composite list of the parasites found under the "exemptions" of the various States is a long one—and it is growing. The Legislatures of the different States are struggling valiantly to overtake the demand. The task seems well nigh hopeless, still there is, as yet, no sign of giving up the chase.

Laws that grant "limited licenses" to persons of limited qualifications are not laws in the interest of public safety. The "limited" applies only to the qualifications of the holder of the license. There is no limit to the character of the ailments that the "limited" license entitles its holder to attempt to treat. If the "limited license" were limited in the sense that diseases to which the specified limited treatment was unsuited could not be dealt with, some of the danger might be eliminated. As it is, some of the most pernicious of these "limited" practitioners treat in their own limited way diseases which are necessarily fatal unless treated by methods which by law are denied to the holder of said limited license. The law plainly says that certain methods of treatment are forbidden, but is silent on the vital point of what diseases must not be treated by the limited methods permitted the holder of the limited license. Withholding the proper treatment may cause the death of the patient just as surely as applying the wrong treatment. The limited practitioner not infrequently makes away with his patient by this indirect method. This way of killing people is legalized in many of the States—and Illinois is one of them.—(Illinois Medical Journal, June, 1922.)

AMOEBIIC ABSCESS OF THE LIVER *

By HORACE J. BROWN, M. D., Goldfield, Nev.

For one who has always practiced in the temperate zone to write about amoebic abscess of the liver would seem to be presumptuous, to say the least, since probably ninety per cent of such cases are seen in the tropics, and those that we see in this latitude usually give a history of having resided in the tropics. I must give as my excuse for writing on this subject my belief that I have found an important symptom that has heretofore been overlooked. While it may be a case of "the inexperienced finding all of the wonderful cases," I can at least say that the records seem to support me in my belief. In order to be as brief as possible, I will report a case that came under my care recently.

CASE REPORT

Mr. P. C. had been given a diagnosis of cancer of the liver and stomach, with a hopeless prognosis. One month later he entered the hospital, begging that something be done for him to relieve his suffering. The patient was a miner, 57 years old, and a native of Genoa, Italy. He came to the United States in 1893 and lived for about fourteen years in Seattle and Alaska. For the last fifteen years he has lived in Nevada, except for six weeks spent in Los Angeles for medical treatment in 1916. The first illness he remembers was in 1906, when he began having dysentery and hemorrhoids. He failed to get relief until 1918, when an examination of his stools showed *entamoeba histolytica*, and he was quickly cured with ipecac (this information was obtained from the physician that treated him). His family history was negative. His chief complaint was nausea, vomiting, pain in epigastrium, and loss of weight. A carefully kept chart from June 8 until July 5 (1921) showed a temperature never above 99 and pulse never over 84, with no chills or sweats. Patient stated that he had never had either chills or sweats. His present trouble began to manifest itself in the fall of 1919, when he began having epigastric distress. At the time of examination his temperature was 98.6, pulse 84, respiration 20, the heart action being irregular. Weight 130 pounds, normal weight 165 pounds. He had an appearance of general malaise, with an expression of depression. In general appearance he was tall, thin, stooped, with lustreless eyes with slight injection of the conjunctivae. The teeth showed extensive pyorrhoëa. The tongue was moist and coated moderately. The lungs were normal, as was the heart, except for the irregular action noted above. Palpation showed a large tumor in the upper abdomen which filled the epigastric and right hypochondriac regions. Urinalysis was entirely negative, except for the presence of a small amount of indican. The examination of the feces did not show either blood or amoeba. The blood count showed 8500 white cells with 60 per cent polymorphonuclears, red cells 4,000,000, and a negative Wassermann. The test meal showed the entire absence of hydrochloric acid in the stomach, and repeated examinations failed to show any blood. The X-ray pictures showed a large sub-diaphragmatic tumor pushing a normal stomach downward and to the left. On palpation the tumor was found to be smooth with no nodules palpable anywhere on its surface. The patient's skin was sallow and of a muddy color. A diagnosis of amoebic abscess of the liver was made and on July 5th an incision was made three inches to the right of the median line, in the upper abdomen, and the abscess drained of a little over two pints of pus, in which no amoeba were found. The abscess was in

the right lobe of the liver, and the pus was mostly thin and white. The gall bladder was distended and slightly inflamed, and there was considerable thickening of the cystic duct, but the gall bladder emptied easily under pressure. The other abdominal organs were normal. The abscess cavity was irrigated daily with an iodine solution and the patient given, by hypodermic, one c.c. of emetine solution daily for twelve days. Recovery was uneventful and he left the hospital on August 26th with only a small discharging sinus which healed in three or four weeks.

The points of particular interest in this case are the absence of all signs of pus, the fact that he contracted the disease in this latitude, and the absence of hydrochloric acid in the stomach. A careful search of the literature fails to show any detailed report of the analysis of the stomach contents and, in fact, only one author mentions it at all. W. J. Mallory (*Journal A. M. A.*, Vol. 75, Page 1774, 1920) reports the examination of the stomach contents, but with a negative result. He also states that "amoebic dysentery, and therefore amoebic abscess of the liver, may occur in persons who have never been in tropical or subtropical countries." I have had one other case of dysentery due to the *entamoeba histolytica* in Nevada, but that case has not as yet developed abscess, and I have been unable to learn of any other cases. I have reported this case in order to bring out the following facts: (1) Owing to the rarity of amoebic abscess of the liver in this latitude, there is the danger of overlooking the condition unless every facility is used to aid in the diagnosis. (2) The peculiar condition in this case wherein all of the signs and symptoms of pus were lacking, i.e., the normal blood count and the absence of chills, fever and sweating. (3) The possible value as a sign of achlorhydria, as found in this case.

Medical Licensure in Illinois—Following the licensure scandal in Illinois a year ago, at least two investigating bodies have recommended to Governor Small that Director W. H. H. Miller be removed or suspended from office. One was the special committee appointed by the governor himself to make an investigation. Nevertheless, the governor has refused to heed the recommendations. Although Director Miller was charged with trafficking in examination papers and physicians' and pharmacists' licenses, his attorneys are attempting to prove, not that Miller et al. were not guilty of the acts indicated, but that they were violating no law and, therefore, that the acts did not constitute a crime! How will the licensing boards of other states regard these actions? Will they be willing to continue reciprocal relations with Illinois when the licenses granted are under such suspicion? Can any excuse be found for such bartering in certificates and licenses as has apparently been done? How about the interests of the public which the state employe is supposed to conserve?—*Journal A. M. A.*, July 22, 1922.

As Lightning Precedes Thunder—When psychoanalysis was more a study and less a fad, Mrs. Elsie Lincoln Benedict, lecturer, traveled singly. But not so now. She marched into the Whitcomb Hotel yesterday with a retinue of some twenty people—lecturers, assistant lecturers, brainologists, personalists, psychologists and mental analysts. Mrs. Benedict is the daughter of a former mayor of Pomona. She is registered from Detroit.—*San Francisco Examiner*, June 24, 1922.

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

THE DIAGNOSIS AND TREATMENT OF GALL BLADDER DISEASE.*

By WALTER C. ALVAREZ, M. D.

PART II.

The first installment of my article, published last month, dealt largely with what not to do in the diagnosis and treatment of gall bladder disease; this second part will deal briefly with the things which I think should be done.

THE FREQUENCY OF GALL BLADDER DISEASE

First, I should state that statistics from many sources show that from five to twelve per cent of all women coming to autopsy have gall stones. If we exclude women under fifty, the percentage is still higher. This alone would be bad enough, but we know that there must be a still larger group of men and women in the community suffering from the pre-calculous stages of cholecystitis. There would seem, then, to be no escape from the conclusion that even the careful clinician is not making the diagnosis of gall bladder disease often enough. The writer gets the idea sometimes that he is becoming mentally warped on the subject because he suspects cholecystitis in every old lady who comes in with flatulence and abdominal pain; and then along come a few autopsies or operations on his patients and he discovers a number of gall stones, the presence of which he had not even suspected.

Now, how are we going to recognize a larger percentage of these cases?

A GOOD HISTORY

First, and above everything, comes a good history. A case will often seem puzzling until skillful questioning brings out the story of one or more attacks of supposed ptomaine poisoning which really had all the earmarks of gall stone colic. The physician must remember that recurrent attacks of severe pain which perhaps waken the patient out of a sound sleep and which leave her upper abdomen sore for days afterwards are due to organic disease; they cannot be ascribed to a neurosis or to slight indiscretions in diet. In the most typical cases the pain begins in the liver region and runs up into the right shoulder blade. Often there is a constant ache on the right side. The soreness is aggravated by riding over a rough road or by reaching up on a shelf. Women perhaps will be unable to bear the pressure of their corsets in the liver region. In milder cases and in the intervals between attacks, the patients complain mainly of belching and bloating. They often feel "bilious" and get a little sallow. Only rarely are they jaundiced. Nausea, regurgitation of food and heartburn are common. Vomiting often comes during the attacks of pain.

Most characteristic and helpful is the patient's statement that although she has a fine appetite she is afraid to eat. She dreads the return of pain. Yet she will admit that what she eats seems to have little or nothing to do with the coming of an attack. She may get a bad one after a week of

fasting, and later she may digest a Thanksgiving dinner without discomfort.

Several suggestive points may be mentioned. A history of a useless appendectomy shows that the symptoms were so bad that the patient was willing to do anything to get well. A history of typhoid fever, chronic sinusitis, empyema, or any other severe and prolonged infectious process is helpful because such things often leave the gall bladder damaged irreparably.

The presence of arthritis, myocarditis and certain forms of headache and dizziness is suggestive because these troubles sometimes clear up after cholecystectomy.

THE PHYSICAL EXAMINATION

This generally shows a woman between forty and sixty-five although, as our experience grows, we are going to recognize cholecystitis more and more in the twenties and thirties, and even in childhood when the trouble often begins. In subacute cases the patient gives a jump when a deep breath brings the tender liver edge down against the palpating hand (positive Murphy's maneuver). The presence of fibroids in the uterus, or other pelvic abnormalities, greatly increases the probability of finding gall bladder disease.

ROENTGEN-RAY EXAMINATION

This can help greatly in several ways. First, it may exclude the presence of other organic lesions such as ulcers and carcinomas. Second, it may show the shadow of stones or of a thickened gall bladder on the plate. Unfortunately most of the diseased gall bladders are free from stones and so thin-walled that they will not show on the plate. Furthermore, many stones are too soft to give a shadow. Third, the screen examination often shows many suggestive things. Cardiospasm is often seen, and I am coming to think more and more of it as an indicator of gall bladder disease. The stomach is often hyper-tonic and overly active; and not infrequently the pyloric antrum is contracted and sharply conical in shape. There may be some gastric stasis, and it may also be apparent to an experienced observer that the gastric mucosa is dry (achylia). The duodenal cap is sometimes deformed by adhesions or pressure, and it may also show defects in emptying. The colonic haustration is often exaggerated. The liver is not infrequently enlarged from the cirrhosis attendant upon prolonged infection of the bile ducts.

LABORATORY TESTS

Gastric analysis often shows an achlorhydria. In the first part of my paper I have explained why I think the Meltzer-Lyon test should not be used diagnostically.

TREATMENT

Like appendicitis, gall bladder disease may go on and kill the patient or it may clear up even without treatment. Once cleared up, it may leave the victim alone or it may come back at intervals until finally something has to be done. We know now that it is best and safest to take diseased appendices out. Unfortunately, we do not know

* Read before the Section on General Medicine of the Medical Society of California May 16, 1922 at Yosemite National Park.

yet what to do with the early cases of gall bladder disease. If we could only look into the future for the different individuals it would be easy. When I see women about sixty-five, emaciated, worn with suffering, anxious for an operation which they cannot well stand, I tell myself that it is my moral duty to urge the younger ones to go to the surgeon. When, however, I see a series of women about forty who have gone ten or fifteen years without attacks or much distress, I waver, and am inclined, as is the patient, to let well enough alone.

Unfortunately, it seems impossible to say when these people are really "cured" and free from the menace of their diseased bile tracts. Thus, one would think, after several attacks of gall stone colic that an interval of twenty years without troublesome symptoms would indicate a cure, but I have seen a woman in whom such a period of relief was really only an interlude. When she was sixty-one her troubles returned; a plate showed that a stone still remained, and an operation showed that a carcinoma had developed somewhere in the biliary tract.

It is hard to say whether medical treatment does much good because remissions occur so frequently and come so suddenly. Ordinarily it is well to advise a smooth, cellulose-poor diet; that is, without salads, coarse vegetables, or fruits. Some people are helped by the taking of Carlsbad salts in hot water before breakfast. Belching and heartburn are often helped by the giving of sodium bicarbonate and magnesia. Hoffman's anodyne often brings relief during attacks at night. During paroxysms of pain, paregoric, morphine and papaverin have to be used. The physician should remind the patients who are losing weight that they will probably have trouble whether they eat or not, so that they had better eat and keep their strength.

DIFFERENT TYPES

For therapeutic purposes the cases may at present be divided into six or seven groups. Medical treatment should be reserved for:

First, those who are in the early stages of the disease, with mild symptoms and long intervals of relief, whose bodies are still young and strong, and who may perhaps yet hope permanently to overcome the infection.

Second, those whose symptoms and findings strongly suggest the presence of cholecystitis but who are suffering so much from nervousness, menopausal storms, hypertension, or myocarditis that it is a question whether they would be any better off even if a markedly diseased gall bladder could be removed safely. These people must be studied carefully before any decision is made in regard to operation.

Third, those who need and want an operation but who, on account of complications, cannot undergo it with any prospect of success.

Fourth, those who have had a cholecystectomy but who still suffer. Many of these people might have gotten a perfect result if they had been put on a smooth diet after operation.

In the absence of definite contra-indications operation should be advised for:

First, those who have reached that stage of the disease in which the attacks are getting steadily worse and more frequent.

Second, those whose indigestion is severe enough to interfere with ability to work and to enjoy life. They should be the more willing to accept operation if they have an arthritis, headaches, dizziness or myocarditis, which may perhaps be cured by the removal of the infected gall bladder.

Third, those who have had their gall bladders drained and who had gotten relief, but who now return with pain and perhaps with new stones.

Finally, and this is a most important point: The surgeon must be willing to admit that at the time of operation he cannot tell a diseased from a normal gall bladder. Men of experience know that not infrequently gall bladders which, according to the history, must have been discharging stones off and on for twenty years, are found at operation to be still soft and apparently normal. If they were not full of stones the surgeon would generally pass them by as innocuous. This does not mean that I am arguing for the reckless removal of gall bladders. Far be it from me; but as Judd says, there is no doubt that in many cases if the patient is to be helped, his gall bladder must be removed on the strength of a careful history taken by an experienced man. This removal can be done with more confidence if there are no other signs of disease in the abdomen to explain the severe symptoms, and if there are adhesions about the gall bladder, an enlarged gland near the cystic duct, an enlarged liver and signs of perihepatitis and pancreatitis. I am convinced that the poor results obtained in many of the cases of operative interference for duodenal ulcer can be ascribed to the leaving behind of gall bladders which had become badly involved in the inflammatory process about the bowel.

Training in Sociology and Public Health an Essential in Medical Education—S. W. Welch, Montgomery, Ala., suggests five essentials which should be made a part of a student's medical education: (1) He needs to have a sympathetic understanding of the fundamental human problems in relation to the many complexities of modern life, and must become familiar with the trend of the best thinking along social lines. (2) He needs to know the place and function of sanitation in relation to the public welfare, the how and when and why of environmental influence on health. (3) He needs to be well grounded in the control of the communicable diseases and in bacteriology. (4) It is imperative that he should have a knowledge of hygiene, especially in its relation to the social and medical sciences which attempt to improve the race by approximating a solution of the basic problems of human existence; that is, the problems associated with the necessity for food, shelter, defense and propagation. (5) He needs to have a knowledge of psychology in its relation to conduct, with regard both to individuals and to groups, in order that he may truly educate both individuals and groups in right habits of action, by supplying motives which appeal to them.—*Journal A. M. A.*, July 29, 1922.

CHRONIC SUPPURATIVE PAROTITIS WITH ACUTE EXACERBATIONS*

By HENRY J. PROFANT, M. D., Santa Barbara
(From the Santa Barbara Clinic)

The parotid gland is subject to two separate inflammatory reactions: the epidemic parotitis or mumps, and the secondary or sometimes called symptomatic parotitis. Mumps appear as a peculiar, primary, infectious disease, usually epidemic, and are rather common. The contagious character, regular incubation period and typical course suggest that the disease is due to a specific organism, but this has not been definitely determined. Suppuration scarcely ever occurs in genuine mumps. The secondary form, acute suppurative parotitis, is a rare condition, as one finds upon referring to the literature on the subject. The case I wish to report is of special interest because of the repeated acute attacks imposed on a chronic suppurative parotitis.

HISTORY

The history is as follows: Mrs. W., age 61, American, was always delicate as a child, and had measles, malaria, chicken-pox, frequent peritonissar abscesses and typhoid fever. At the age of twelve she had mumps of the right parotid gland with an uneventful recovery. During adolescence and early womanhood she enjoyed fairly good health, but was never robust. Since then she was operated for a strangulated ovarian cyst and had the left breast removed for a suspected carcinoma. At the age of forty the right parotid gland became acutely inflamed. No operation or serious illness preceded this attack, and for a time it was considered as another attack of mumps. However, after the acute symptoms subsided the gland failed to return to normal. Each day it was distended with a thick yellowish-white material, which would not evacuate spontaneously but had to be expressed from the gland through the duct. This condition has remained and has behaved analogous to a chronic suppurative dacryocystitis, with recurring acute attacks. In the past twenty years she has had fifteen acute attacks varying in severity and duration. Unfortunately this affection is only one of many other disorders, and her chief complaint is a severe bronchial asthma which began fourteen years ago. Since the onset she has sought relief in many parts of the country, but it is one of those severe forms of asthma in which practically everything has been tried with disappointing results. Lack of time prevents me from considering the asthmatic condition except from the standpoint of the possible relationship to the parotid gland and vice versa. The chronic suppurative condition of the gland is determined by an examination of the material which is expressed daily. The smears show numerous pus cells, and cultures usually show staphylococci, although at intervals streptococci viridans have been isolated. I have personally observed the last two acute attacks.

The first of these occurred in May, 1921, and according to the reports of the patient's daughter, who is her constant companion, the attack followed the usual course of the preceding severe ones. I was called because the patient could not empty the gland. There was a swelling the size of a walnut, but no external signs of inflammation; no redness or tenderness. As had been done in the previous attacks, I probed the duct, found it patent, and injected normal salt solution. Heat was applied externally. These measures were continued daily, but no drainage was obtained. The

gland increased in size and by the third day became tense, tender and painful. The temperature rose to 102 and the white count to 15,000. Large doses of bromides and codeine became necessary. An X-ray was taken, but no calculi were seen. The fifth day drainage began spontaneously and foul-smelling pus exuded from the duct in which streptococci viridans were isolated. By the twelfth day the gland resumed its chronic condition.

The past two years the patient has been confined to bed because of the severe asthma, an alarming attack occurring every two or three months. The first week in April of this year she had a violent gastric upset with nausea and vomiting, and it was necessary to give merely glucose per rectum for two days. Milk was resumed when the attack subsided.

A few days later, April 15, the gland again failed to empty. The course differed this time in that the gland failed to drain the fifth day. Expression of the gland and duct, probing and injection of one to two cc. of normal salt solution were again attempted. On the sixth day the skin over the gland became red and in spots almost purplish, and an edema of the cheeks and eyes occurred. The temperature rose to 101 and remained about that until the seventh day, when there was a decided chill, followed by a temperature of 104 and a white count of 20,000. Any operative interference had been delayed because of the fear of a permanent fistula, and the fact that in the fifteen other attacks the pus eventually drained through the duct, but this time the general condition demanded interference. An ounce of foul yellowish pus was aspirated from a point of fluctuation 2 cm. from the angle of the jaw, and a drain introduced. A blood culture taken at this time was negative. Dr. Andrews, who had seen the patient during an acute attack five years ago, suggested intramuscular injections of 5 cc. sterile milk every third day for its alexin action. Good drainage was maintained, the inflammation gradually subsided, and in two weeks the wound closed spontaneously. The gland has again resumed its chronic condition. The observation of the two acute attacks and a study of the cases reported in the literature lead to several conclusions. A brief review of the essential points of the anatomy and physiology of the gland is necessary.

ANATOMY AND PHYSIOLOGY

You recall that a simple gland is one which remains undivided; and that a compound gland, on the other hand, is one that breaks up into two or more branches, and may be tubular, alveolar or of a mixed tubular and alveolar form. The parotid gland is a typical compound acinous gland; that is, it is composed of a main duct which branches and re-branches freely. The terminal divisions of the ducts end finally in specialized secreting parts known as the acini. The gross structure of the gland consists of a number of masses, often as large as peas, which are surrounded and held together by connective tissue. These are known as lobes, which in turn are made up of a number of smaller masses known as the lobules. The parotid fascia, which is a continuation of the deep cervical fascia, forms a firm capsule for the gland. The main duct (Stenson's) opens into the vestibule of the mouth by a very small orifice opposite the crown of the second upper molar tooth. Its turn around the anterior border of the masseter muscle must be borne in mind in passing the probe into the duct from the mouth. The salivary glands secrete under nerve stimulation. The parotid nerves are derived from

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

the auriculo-temporal and from the sympathetic. An inhibition of secretion is therefore an inhibition primarily through the nervous system.

ETIOLOGY

Acute suppurative parotitis, as stated before, is a secondary condition and may occur in the course of an infectious disease, but most of the cases reported are those occurring as a post-operative complication. There is a diversity of opinion as to the etiology. Paget in 1886 proposed the term sympathetic parotitis. He observed that the cases usually followed operations on the ovaries or other genital organs.

Hauan and Pilliet first suggested in 1889 that parotitis could occur as a secondary infection of Stenson's duct by mouth organisms, called an ascending infection. They demonstrated that the inflammatory processes begin in the center of each lobule and spread later to its periphery. A number of men accept this theory. Frank reports cases following appendicitis, one fatal, and concluded that its origin is due to an ascending infection of Stenson's duct. Collins reports eight cases, post-operative, with four fatalities, and concludes that its development is favored by a dry condition of the mouth and a lack of fluids in the body, and that it is an ascending infection. Clause and Duplay concluded from clinical observations and experiments on animals that infection of the parotid occurs in abnormally predisposing conditions; that micro-organisms introduced must be excessive in number and very virulent; that the general vitality of the animal must be lowered and that the normal secretion of the parotid altered in quantity and in quality.

Fisher reports twenty cases, and after a careful study of the subject concludes that septic parotitis is hematogenous in origin; that secretion of the gland is under the influence of nerve stimuli; and that the incidence of post-operative parotid involvement is neurologically dependent upon surgical shock or inhibition of the secretory and trophic fibers from higher psychic centers. Deaver classifies post-operative parotitis into three groups: metastatic, occurring only in pyaemic condition; ascending parotitis due to ascending infection via the duct; and traumatic, the result of direct pressure on the parotid gland. Blair believes neither theory, hematogenous or ascending, is above dispute. The behavior of one of his cases has suggested to him the probability of stone irritation or obstruction.

There are two essential factors in the production of an acute attack of parotitis. There is a predisposing cause and an existing cause. The latter, of course, is the infection, which may be hematogenous, ascending through the duct or in the gland as a chronic infection. The predisposing cause is apparently more important, and this is the inactivity of the gland. The inactivity due either to inhibition of secretion by shock or lack of stimulation from oral starvation. This inactivity is illustrated in the report of Rolleston and Oliver following the medical treatment of 1000 cases of gastric ulcer; they found that secondary parotitis occurred ten and a half times more fre-

quently in cases treated by oral starvation than in those allowed food by mouth. Preceding the present acute attack, as mentioned above, the patient has a gastric upset in which it was necessary to institute oral starvation for two days. The inactivity of the gland apparently produces a stasis which increases the susceptibility of the gland.

The treatment of this affection may be considered under prophylactic and active. The former consists in maintaining an active secretion of the gland. Fenwick, in an article entitled "The prevention of Parotitis During Rectal Feeding," states that he had the patients suck an India rubber teat about two inches long, which produced the desired effect. Collins states that a good way to excite the secretions of the mouth and keep the current of saliva is to allow the patient to suck on a stick of lemon candy after operation. In the active treatment of an acute attack one must consider the general condition of the patient and the severity of the local condition. Morestin, in 1907, advocated expression of the duct; he reported a post-operative case which became fluctuant and was relieved by this means. Picque pointed out that when suppuration occurs it results rapidly and habitually within thirty-six hours of the infection. He states that nothing from a clinical standpoint allows any differentiation, at least in the beginning, between the gangrenous and other types. The gangrenous types always appeared fatal to Picque. He never allows a parotitis to evolve spontaneously. Wagner, in 1904, stated that post-operative parotitis ends in death in 30 per cent of the cases. Lequen in 1907 emphasized the fact that when the treatment is by incision the surgeon must not count upon finding fluctuation. Owing to the very close texture of the parotid, the pus infiltration into the glandular tissues, creates multiple pockets, and, exceptionally, collects. He concludes that a single incision sometimes is sufficient, but often multiple incisions are necessary. Gary, in 1911, stated that suppuration is not always easy to recognize; and he has noted a rupture through the skin, auditory canal, sheath of sterno-mastoid, mediastinum, and a retropharyngeal abscess formed. In their reports Frank, Blair, Collins, Deaver and Fisher advise early incision and drainage. You recall that the essential pathology of an acute inflammation is a swelling of the epithelial cells of the acini. This hypertrophy causes a blocking of the many collecting tubules, a retention of saliva results, and with the continued inflammatory reaction the gland becomes swollen. The parotid fascia forms a firm capsule about the gland, and pain results from the marked tension. It is essentially a pressure pain. Suppuration increases the severity of the condition, but because of the firmness of the parotid sheath its degree cannot be determined. The treatment, therefore, must aim to reduce the inflammation, relieve the pain and promote drainage. The probing of the duct is a good means of determining the presence of a stone, but when it is found patent no further use is necessary. I have been convinced that the attempted irrigations of the gland through the duct with the hope of "soften-

ing the material" is unsatisfactory. Immediately following the injection the pressure pain increases in severity. As long as the epithelial cells are swollen and compress the collecting tubules leading to the duct, the many branches cannot be reached by probing or irrigation. What benefit may be derived by this means is greatly offset by the increased pain, edema of the surrounding structures, and the fact that drainage is not established or the course of the acute attack shortened. Heat locally and at times alternating with cold compresses are the best means of reducing the inflammation and pain.

Reports show that the condition must be considered seriously; the mortality has been given as high as 30 per cent. The consensus of opinion is that if the inflammation is increasing, or is no better by the fourth day, the gland should be incised and drained.

CONCLUSIONS

That chronic suppurative parotitis with acute exacerbations is a rare condition.

That an acute attack is predisposed by inactivity of the gland.

That susceptibility of the gland is favored by stasis.

That the exciting cause is an infection present in the chronic condition of the gland.

That the prophylactic treatment is the maintenance of an active secretion.

That the active treatment is local application of heat alternating with cold.

That the condition must be regarded with concern and drainage established by free incision whenever the general symptoms warrant.

(1421 State Street)

Syphilis of the Lung—The results of a study of all the patients admitted to the Cincinnati Tuberculosis Sanatorium (a municipal institution) for two years are given by Alfred Friedlander and R. J. Erickson, Cincinnati (Journal A. M. A., July 22, 1922). About 65 per cent of the cases belong to the far-advanced group. During 1920-1921, 791 adult patients were admitted to the sanatorium. Thirteen per cent of all patients living had positive blood Wassermann tests; 17 per cent of all patients dying had had positive Wassermann tests. In this series of 791 cases, the diagnosis of pulmonary syphilis was made in four (0.5 per cent). All four cases occurred in white patients, three men and one woman. The diagnosis of pulmonary syphilis was not made in any of the 182 colored patients. The woman with pulmonary syphilis died; she had a combination of pulmonary tuberculosis and syphilis. The three men recovered, two under intensive antisyphilitic treatment, the third without such treatment. In addition to these four cases, two other cases of pulmonary syphilis from the wards of the Cincinnati General Hospital are reported.

Utah State Medical Association—The twenty-eighth annual session of the Utah Medical Association will be held in Salt Lake City August 31, September 1 and 2. Among the interested features of this meeting will be the course in clinical diagnosis to be conducted by Harlow Brooks of New York City. The clinics will be held daily in the County Hospital in Salt Lake City. The program of the State meeting contains many interesting papers by the physicians and members of the Utah State Society and distinguished guests. A. C. Behle is president of the society and William L. Rich secretary.

WHY MEDICAL SOCIAL SERVICE DESERVES A PLACE IN HOSPITAL ORGANIZATION, AND THE DUTIES OF MEDICAL SOCIAL WORKERS TOWARD HOSPITAL ADMINISTRATION

By FRANKLIN R. NUZUM, M. D., Santa Barbara, Cal.

In approaching the question as to why medical social service should occupy a place in hospital organization, let us review briefly the four duties of a hospital. They are:

1. The care of the sick.
2. The advance of medical science.
3. Making the hospital a center for activities concerning preventive medicine and community health.
4. The training of hospital personnel.

The care of the sick has been considered a duty belonging solely to the hospital. The medical responsibility rests with the physician. But the hospital and the physician have both found that medical social service is of great aid in obtaining the co-operation of the patient, in carrying out medical orders more effectively, and as a result of these and other helps actually hastening convalescence. In short, this means that the medical social worker is materially aiding in the care of the sick. In 1898 Sir Wm. Osler said as he looked over the patients collected in a medical dispensary: "If three out of ten of these get what they really need we are doing well. We are not equipped to treat the other seven." This statement still holds true. Why? Because the other seven need more than medicine and surgery. They need personal contact and help of various kinds, such as medical social workers are trained to give. This help is primarily therapeutic and of a kind hitherto much neglected. And what does this mean to the patient? Let an illustration answer. A patient is admitted to the hospital with a decompensated heart. He has but a limited fund of money for the care of his family while he is out of work. He does not do well in the hospital, because he soon finds that he will require a longer period of rest than the fund for the maintenance of his family will permit. He worries, he becomes restive, and in spite of the fact that the hospital and physicians are giving good service and treatment, the patient is not doing well. How many times has such a patient left the hospital and returned to work? But he is soon back. The hospital might have avoided repeated readmissions and would have been financially ahead if the patient in the first instance had remained under treatment a proper time.

In a similar instance which I have in mind the medical social worker was the first to report to the physician that a certain patient, on account of worry concerning the welfare of his family, was contemplating leaving the hospital much too soon. Through her service the family was temporarily provided for, the patient's mind was placed at ease, and his acute nephritis cleared up splendidly. Can anyone gainsay that the service of the medical social worker in effecting mental rest and co-operation on the part of the

patient was not an important feature of the medical care in bringing about that patient's recovery? Thus medical social service is directly concerned with the first duty of the hospital as outlined above, which is the care of the sick.

The second duty of the modern hospital, the advancement of medical science, is likewise interrelated with the functions of the medical social worker. The advancement of medical science depends not alone upon research work in the laboratory, but upon critical study of clinical records and case reports. As Haven Emerson has said: "Before we can claim to be developing or even protecting health we must know the sum and character of human sickness. Our first and best and perhaps our last, source of information will be the organized medical service shops, the hospitals, the dispensaries, the sanatoria, convalescent homes and domiciles of the insane, of children, of paupers, and those great institutions now infiltrated throughout the country, the visiting nurse association, whose experience and records offer often a greater range and bulk of material than the larger hospitals of a city or State all combined." It at once becomes apparent that the records of the medical social workers are important, not alone in the care and treatment of the individual patient, but from an altogether different angle, that of investigation or research. A study of these records as furnished by the numerous groups of social medical workers throughout this country will afford a great amount of material for the study of diseases from an angle heretofore little considered. And it will represent material that cannot be gotten so well in any other way.

This brings up the importance of the records kept by the medical social worker. Her record concerning the diagnosis of the patient's illness, the treatment, the follow-up notes and the final result should be carefully and accurately done. Since they may some time be used in an intensive study of economic or disease conditions in a given locality, or in many other ways, their value will be in direct proportion to the care and thoroughness that was spent in their making. When completed such a social history should be filed as part of the hospital record. In the event that the patient was not a hospital case, it should then be filed in the out-patient department, so that it is accessible to any one who may profit from its study.

For many years the average hospital required no medical history at all. But the importance of a reliable medical history is so great from so many standpoints, including the matter of research, that medical organizations are expending great effort in improving the character of those histories throughout the hospital world. And since the records of the medical social workers are likewise valuable as a part of the complete record, they should be carefully compiled. In a word, the organized body of medical social workers should realize the value of good record keeping on their part, and thus make their material available now, rather than waiting for years until some organized

effort becomes necessary to awaken them to a realization of this duty.

The third duty that hospitals must assume, though many have not as yet done so, is to make themselves community centers in better health instruction and preventive medicine. And what better way is there by which a hospital may bring a community to the realization of its worth? Or bring the community to comprehend the great asset its hospital is? Up to the present some have been interested only in the patient himself, endeavoring to rid him of his disease. We are just beginning to be concerned about the members of his immediate family, whom possibly we may save from illness altogether. "Man does not live unto himself alone." And it is just as true that "if one wishes to be well he must be certain that his neighbors are well." One of the most important lessons taught by medical science has been the significance of environment and the community aspect of disease. Some individuals may have inherited certain predispositions or physical weaknesses. It is then important that all that is possible is done for his own physical well-being. In this way he may be prevented from contracting an illness, or, once the victim of a chronic illness, he may be prevented from passing it on. Greater good will result from preventive medicine, from protecting many in addition to caring for the person who is ill. To help the "other seven" is the medical social worker's problem, and if a hospital or a physician wishes to succeed in this work they must use as their assistants trained workers in this field.

In short, the time is at hand when the hospital may entrench itself firmly in its community by seizing upon this opportunity for the spread of knowledge concerning public health problems and preventive medicine. There are many ways for the hospital to go about this. One agency that can be used with greater effect than all others is the medical social worker department.

There remains the fourth duty of the hospital, the training of hospital personnel, administrators, internes and nurses, as well as medical social workers and other technicians. If hospitals do not train their employes, from whence is a supply to be obtained? And what department in the hospital is better able to train medical social workers than that department itself? The need for such work in every hospital maintaining a clinic is great. The greatest difficulty has been the backwardness on the part of the hospital authorities, often through lack of funds, to develop such a department. In answer to this, it has been shown that such a department actually saves its cost by lessening the number of clinic patient days in the hospital. The supply of trained medical social workers is limited, and any hospital maintaining such a department has the responsibility of training social workers, just as it should train the others of its personnel.

Since the medical social worker fits logically into each of the four undertakings of a hospital, it is apparent that this department should have a definite place in the hospital organization. The more prominence it is given, the greater will be

the return, not alone to the hospital, but to the community. The medical social worker offers an excellent means of obtaining and holding the community interest, because her appeal is through personal service and effort. And the interest of a community in its hospital is vital to the welfare of the hospital.

The duties of medical social workers toward hospital administration are four at least:

1. The making of social and economic diagnoses.
2. Making accurate records, including treatment and follow-up notes.
3. Saving hospital days for the institution.
4. Acquainting the community with the value of its hospital.

The making of social and economic diagnoses is an important obligation, and the hospital administration looks to the medical social worker for its accomplishment. The importance of this diagnosis cannot be over-estimated in outlining for the clinic patient his treatment and after care. It is well enough for the physician to tell the patient with cardiac disease that he must live on the ground floor and have a light occupation. But if left to the patient, nothing will result from the advice. The medical social worker, having investigated the home conditions, instructs the patient in things that especially pertain to his well-being. And through some relief agency the patient is materially assisted in getting an abode on the first floor and in obtaining light work. As a result, the patient is able to earn some part at least of his living and is not continually returning as a hospital patient.

Dispensing of material relief is not the function of the medical social worker. Combining material relief and medical aid in the same person often spoils the possibilities of the latter. The duty of the medical social worker is therapeutic. She should not lessen the possibility of the success of her undertaking by doing things which in general practice have been proven harmful. Nor should she use her time in doing things which some other organization can do better, and which is outside her field as a technical assistant to the physician.

The second duty of the medical social worker to the hospital administration is the keeping of a creditable record for the information of the physician of the work that she is doing with each patient. If she has recorded properly the social and economic diagnosis, the treatment, the progress of the patient, the reasons for poor progress if there be any, and other follow-up notes, much valuable assistance is at once available to the physician. She often finds the first information of the beginning of an epidemic of disease, and her records accumulate important statistical data. Much information may be recorded, the value of which is not at all suspected at the time the record is being made. The importance of carefully kept records and of their finally being filed as a part of the hospital record warrants a repetition of the statement made earlier in the paper,

that if the medical social worker has any obligation to the hospital administration at all, it is that of turning over records which show real thought and careful work, and which will be useful to the physician.

The saving of hospital days is a third duty of the medical social worker to the hospital administration. This is of benefit as an economic measure. A patient's sojourn in a hospital may often be materially reduced as a result of the ministrations of the medical social worker. Such instances have been referred to. Or the patient's convalescence may be completed in his own home under the medical social worker's supervision, who makes contact both with the patient and the physician. In either event the hospital has a bed that may be used for other purposes.

Another financial assistance that may be rendered the hospital administration is at the admitting clerk's desk. No one is in a better position to know or to find out the financial status of a clinic patient and of his ability to pay at least part of his expense. It has often been said that the expense of the medical social department may be more than met in this way.

And finally the last, but not the least, of the medical social worker's duties toward the hospital administration is that of acquainting the public with the worth to the community of a good hospital. The medical social worker is in one sense a field agent of the hospital, and she has many opportunities to interest various groups of people in the undertakings of her institution. A hospital holding the confidence of its community stands as a bulwark against all the medical fakes and frauds that are found in California. And the opportunities which the medical social worker has to increase the confidence of the community in her institution must not be overlooked.

Medical and Hospital Work in Russia.—Moscow, July 3 (by mail)—Thirty-three physicians and surgeons, each in charge of one of the Moscow hospitals, have united in signing a letter of thanks to Dr. W. D. Nickelsen, medical supervisor of the Moscow District for the American Relief Administration. The letter follows:

"At the moment when the Moscow city hospitals were insufficiently supplied with food and other necessities for the care and cure of the sick, the American Relief Administration came of its own accord to the assistance of those hospitals, supplying them regularly with medicines, instruments, things needed for the care and treatment of the patients, linen, blankets, gowns, and also took upon itself the supplementary feeding of the patients. This assistance has greatly improved the condition of the patients and has also helped to check disease in general.

Being aware of the great good done by the humanitarian activities of the American Relief Administration, the chief physicians of the Moscow hospitals are conveying to that organization, in the person of the chief of the Moscow section, their sincere appreciation for its present activities and its readiness to continue that work in the future."

OBSERVATIONS ON THE CARDIOVASCULAR SYSTEM IN THYROID DISEASE*

By WM. J. KERR, M. D., Associate Professor of Medicine, and GEORGE C. HENSEL, M. D., San Francisco.

The changes produced in the cardiovascular system by thyroid disease have long been appreciated by clinicians. There is need, however, to review some of the more important features observed, so that patients with grave cardiac disorders will not be subjected to unnecessary risk at operation nor will they be denied adequate treatment to support and restore the circulation.

It is our purpose to call attention to some irregularities of the heart in thyroid disease which are extremely common and which are not emphasized sufficiently in the literature. These irregularities play a considerable part in determining the outcome of the more severe cases and their recognition is not difficult.

The studies on which this report is based have been carried on at the University of California during the past two years.

GENERAL CONSIDERATIONS

Of the one hundred and eighty-one goiters studied, one hundred and twenty-three were classified as adenomas and fifty-eight as hyperplasias. In reviewing the adenomas, no attempt has been made to draw a sharp distinction between the toxic and non-toxic types. Approximately half of these cases showed no signs of toxicity and in a relatively small number the goiter produced pressure symptoms only. The average age was forty-six years and a tumor was noted at the average age of twenty-nine years, or seventeen years before appearing for treatment. Symptoms had been present on the average for eight and three-tenths years. Females were affected one hundred and six times and males seventeen times. Cardiovascular symptoms were more or less marked in forty-four per cent of the cases. Rapid and forceful beating of the heart and "palpitation" were the symptoms usually complained of, although vasomotor disturbances, irregularities of the heart, dyspnoea and breathlessness were frequently noted. Pain in the region of the heart and anginal attacks were rare. Central nervous system symptoms, including nervousness, tremors, astasia abasia and emotional instability were described in fifty-eight cases. Gastrointestinal symptoms, usually diarrhoea or diarrhoea alternating with constipation, were complained of in only four cases. There was marked progressive loss of weight in eight cases and a gain in two cases. In no case was there marked exophthalmos. When the eye changes were noted, usually only one or two of the minor signs were described. The average basal metabolic rate, when determined, was 30.2 per cent above the theoretical normal, but when the non-toxic cases were excluded, the average rate was 47 per cent above the theoretical normal. There were two deaths.

* From the Medical Division, University of California Hospital. Summary of paper read before the Section on General Medicine, California Medical Association Meeting, Yosemite National Park, May 15 to 18, 1922.

(Most of the patients were on the surgical service of Dr. W. I. Terry, to whom we are indebted for the opportunity of making the studies here reported.)

Of the fifty-eight cases with hyperplasia, forty-four presented exophthalmos and other eye signs and in five others these eye signs were slight or doubtful. The average age was thirty-six and four-tenths years and the tumor was observed at the average age of thirty-three and nine-tenths years, or two and five-tenths years before entering the hospital for treatment. Females were affected forty-three times and males fifteen times. Symptoms had been present for a relatively brief period. In about one-third of the cases, the tumor was noticed before the onset of symptoms; in about one-third the appearance of the symptoms preceded the discovery of the tumor; and in the remainder the symptoms and tumor appeared at the same time. The average duration of symptoms was about three months. Cardiovascular symptoms were complained of in 91 per cent of the cases. "Palpitation" and rapid, forceful beating of the heart were usually present; irregularities, dyspnoea, breathlessness and vaso-motor disturbances were common. Fifteen cases presented signs of decompensation. Central nervous system symptoms were present in fifty-six cases and were more pronounced than with the adenomas. Gastrointestinal symptoms such as diarrhoea and vomiting were complained of in seventeen cases. There was a definite loss of weight in thirty-eight cases. The basal metabolic rate averaged 58.7 per cent above the theoretical normal. There were seven deaths.

SPECIAL CONSIDERATIONS OF THE CARDIOVASCULAR SYSTEM

Symptoms—A brief statement of the cardiovascular symptoms is given above. It is the prevailing opinion that the hyperplastic goiter causes more profound changes in the circulatory system than is found in association with toxic adenomas. Our observations suggest, however, that, so far as the heart is concerned, the disturbances are practically the same in both groups. Where differences occurred, they seemed to be due mainly to the degree of toxicity. The vascular system, however, showed more pronounced changes in the hyperplastic group than in the group of adenomas. Among the earliest symptoms were tachycardia and a consciousness of the heart beat. Many patients complained of attacks of "palpitation." These spells, which were more frequent later in the disease, probably represent paroxysmal attacks of auricular fibrillation or flutter. Throbbing of the vessels in the neck and periphery, pulsation in the thyroid and a heaving precordium were usually marked in severe cases. Sleep was frequently interfered with because of these sensations and such patients preferred to lie on the right side. Dyspnoea and breathlessness on exertion, and in the later stages cough, progressive edema, cyanosis and other signs of decompensation were observed where proper treatment had not been instituted. Goiters producing pressure symptoms were relatively infrequent causes of cardiovascular disturbances as compared with the overacting glands.

Physical Signs—Inspection in the early cases revealed very little aside from a forceful apex impulse in the usual position, slightly increased carotid pulsations and flushing of the face and neck. As the disease advanced, the apex impulse

became more forceful with a diffuse heaving of the precordium. The apex impulse was then displaced to the left and, in later stages, downward. The carotid arteries and peripheral vessels showed increased pulsations, and capillary pulsation was frequently noted, especially in the hyperplastic cases. When the myocardium began to fail, the venous pressure rose, the veins stood out and they occasionally showed unusual systolic pulsations extending to the lower arm and hand (noted in three of our cases). When decompensation began, the usual signs appeared: such as pulsating liver, systolic venous pulse in the neck, edema of the lungs and edema of the legs advancing to anasarca. During the stage of decompensation, the heart was frequently irregular and no sign of an A-wave could be found in records from the jugular vein. On palpation the apex impulse was usually forceful and showed no displacement in early cases; but as the condition advanced, the impulse became more marked and diffuse, and it moved to the left and downward. A systolic or presystolic thrill at the apex, or a systolic thrill at the pulmonic area was noted in a few cases. A distinct shock was felt at the pulmonic area, accompanying the second sound. A systolic thrill was frequently felt over the thyroid vessels in hyperplastic glands, rarely in adenomas. The pulse was usually soft and oftentimes dichrotic. A water-hammer pulse was common in the hyperplasias. The rate was quickened in toxic cases, being ninety-three in the toxic adenomas and one hundred and seven in the hyperplasias in our series. In the early stages the pulse was generally regular, although a sinus arrhythmia of the respiratory type was frequently observed. Later, many cases showed the more unusual types of irregularities, and in the terminal stages they were very commonly observed. By percussion the heart was found to be gradually enlarged to the left and downward, there was a well defined increase in dullness in the third and fourth left interspaces, as is seen in organic mitral disease, and later the dullness was increased to the right. Enlargement, usually to the left, was noted in forty-one of the adenomas and in forty-three hyperplasias. In the absence of thymic enlargement or a substernal extension of the thyroid, the substernal dullness was found to be increased, due to the dilatation of the great vessels. Auscultation revealed the signs of an overacting heart in toxic cases. The sounds were quickened, ringing and loud, giving an impression of hurried ineffectiveness. As the condition advanced, a soft systolic murmur was usually heard at the apex and a short, rough systolic murmur at the pulmonic area. Later a loud systolic murmur was frequently heard all over the precordium and was transmitted to the vessels of the neck, with a bruit over the thyroid vessels and gland. A definite bruit was noted over the gland in thirty-three of our cases of hyperplastic thyroids and in only three of the cases with adenomas. In the advanced stages of myocardial failure a diastolic murmur was occasionally heard at the pulmonic area or a soft systolic murmur appeared over the tricuspid area. Murmurs were noted in our series in forty-three cases of adenomas and in forty-six cases of hyperplasia.

An unusually large number of cardiac irregularities were observed. Of sinus arrhythmia we have no accurate data, as its finding was considered of little significance. It was frequently observed and possibly should be further studied. Extrasystoles were observed in only nine cases and in two of these it is probable that an unrecognized auricular fibrillation was present. Auricular fibrillation was observed in twenty-nine cases, occurring in nine cases with adenomas and twenty cases with hyperplasia. In fifteen of the twenty-nine cases the fibrillation was paroxysmal in type and in several cases many attacks were observed. In eight cases auricular fibrillation alternated with auricular flutter, and in two cases auricular flutter was observed alone. Paroxysmal auricular tachycardia with a rate of one hundred and ninety occurred in one case. (See Table 3.)

These observations on the frequency of cardiac irregularities have suggested that many of the attacks of "palpitation" which patients describe are due to a disturbance of the normal mechanism of the heart beat by the inception of one of these unusual rhythms. Such attacks frequently came on suddenly and usually lasted only a short time. They were accompanied by a sense of fullness in the chest, a disagreeable, rapid, forceful action of the heart, flushing of the face and neck, and breathlessness. The termination was usually abrupt.

On questioning patients who were seen during attacks of auricular fibrillation or flutter, it was found that their sensations were the same as those experienced during the previous spells of so-called palpitation. In our opinion this shows pretty clearly that what they call palpitation is really the result of serious auricular fibrillation or flutter. We feel sure that this has not been sufficiently recognized in the past.

X-ray studies on the toxic cases generally showed the heart to be enlarged to the left with widening in the region of the conus and left auricle—the so-called "mitral type." In some cases, particularly of the hyperplastic group, the heart was of the "aortic type" with the great-vessel shadow definitely increased.

Blood-pressure determination showed in the adenomas an average of 133 mm. Hg. (systolic), 78 mm. Hg. (diastolic) and a pulse pressure of 55 mm. Hg., while in the hyperplasias the average was 141 mm. Hg. (systolic) and 71 mm. Hg. (diastolic) with a pulse pressure of 70 mm. Hg. In several cases where the systolic and diastolic pressures were high before operation, a marked fall was observed following surgical treatment. Some of the more striking examples are shown in Tables 4 and 5. In one patient with a hyperplastic goiter who had a blood pressure of 200/100 on admission, there was a fall to 178/65 after medical treatment.

Venous Pressures and Pulsations—No attempt was made to measure accurately the venous pressures, but in advanced cases the pressure in the veins was definitely increased. In three cases we observed pulsating peripheral veins in the arms and hands, which cleared up after treatment.

Electrocardiograph and Polygraph tracings were made on most of the cases showing unusual ir-

TABLE 1
General Findings

Type of goiter....	No. of cases.....	Sex	Average age	Average age tumor noted	Average duration of symptoms	No. with eye signs.	No. with C. N. S. symptoms	No. with gastro-intestinal symptoms	Marked loss of weight	Average basal metabolism	No. of deaths.....
Adenomas toxic and non-toxic	123	M. 17 F. 106	41.38 yrs.	29.2 yrs.	8.3 yrs.	1 slight 6 doubtful	58	4	8	30.2% plus (all forms) 47% plus (toxic only)	2
Hyperplasias	58	M. 15 F. 43	36.4 yrs.	33.9 yrs.	3 mos.	44 5 doubtful	56	17	38	58.7% plus	7

TABLE 2
General Cardiovascular Findings

Type of goiter....	No. of cases.....	Cardiac symptoms.	Per cent with cardiac symptoms...	Average pulse rate.	Average Blood pressure mm. Hg.		Average pulse pressure mm. Hg.	No. with cardiac enlargement	No. with murmurs.	No. with bruit over thyroid or T. arteries	No. with signs of decompensation ..
					Sys-tolic	Diastolic					
Adenomas toxic and non-toxic	123	54	44%	85 (95 in toxic cases)	133	78	55	41	43	3	3
Hyperplasias	58	53	91%	107	141	71	70	43	46	33	15*

* Three of these cases presented unusual and marked systolic pulsations of the veins of the forearms and hands.

TABLE 3
Cardiac Irregularities

Type of Goiter	No. of Cases	Auricular Fibrillation	Auricular Flutter	Paroxysmal Tachycardia	Extrasystoles	Sinus Arrhythmia
Adenomas toxic and non-toxic	123	9 (4 paroxysmal) (2 alternating with auricular flutter)	3 and 1 probable (2 alternating with auricular fibrillation)	1 (rate 190)	6, including 2 cases of probable auricular fibrillation	Frequent No exact data
Hyperplasias	58	26 (11 paroxysmal) (6 alternating with auricular flutter)	4 and 2 probable (all alternating with auricular fibrillation)	0	3	Frequent No exact data
Totals	181	29	7 3 probable	1	7 2 doubtful	Frequent

TABLE 4
TOXIC ADENOMAS
Blood Pressure, mm. Hg.

Case No.	Before Operation	After Operation	Six Months Later
11447	215/105	140/80	
12349	190/100	140/70	170/90
12773	160/80	128/75	
13489	150/80	124/60	
11755	188/100	133/70	
13828	190/95	130/70	
13451	180/110	145/90	
8541	190/100	160/80	
10767	238/142	160/100	

TABLE 5
HYPERPLASIAS
Blood Pressure, mm. Hg.

Case No.	Before Operation	After Operation
12976	152/86	122/82
11586	145/65	138/45
10444	140/90	128/75

regularities and on some of the uncomplicated cases. Twenty-five cases were studied at intervals during their stay in the hospital. In addition to the changes in rhythm noted, there were certain variations in the auricular complex which were frequently observed in more severe cases. The P-waves were widened and increased in amplitude, frequently slightly notched in Lead I and having a diphasic character in Lead III. These features were noted in ten out of fourteen cases with regular rhythm. The P-R interval was 5/25 seconds in three cases and there was an arborization block in one case. Bundle branch lesions were not observed. Right hypertrophy was shown in two cases and left hypertrophy in three cases. The T-wave, when flattened or inverted in Leads I and II, has been found to indicate a bad prognosis in accordance with the findings of Krumbhaar. In our series there were six of such cases, all showing advanced myocardial disease and, as was to be expected, two or thirty-three per cent of them died.

Diagnosis—The diagnosis of the types of goiter studied were made on the clinical signs and symptoms combined with pathological findings at operation and necropsy. The cardiac symptoms and signs were usually obvious, although careful observation and instrumental means were frequently necessary to differentiate the irregularities encountered.

Treatment—No preliminary treatment was given in the non-toxic or moderately toxic adenomas previous to operation. The patients with more advanced toxic adenomas, with signs of cardiac failure, and many of the patients with hyperplasias were given preliminary medical treatment or received medical treatment alone. Mental and physical rest was insisted upon. Bromides or quinine hydrobromate were given when indicated. Ice bags were used over the thyroid gland and heart in the more toxic cases with considerable relief from distressing symptoms. Digitalis in the form of tincture was used, when indicated, under careful supervision. In moderate doses the drug produced excellent results and was very useful in controlling and possibly in preventing attacks of abnormal cardiac rhythms, particularly auricular fibrillation. One patient died during operation, possibly from the effects of excessive digitalization with "ventricular standstill." Another death occurred from auricular fibrillation with marked signs of thyrotoxicosis developing two days after operation. Quinidin sulphate seemed to have a beneficial effect in controlling attacks of auricular fibrillation in one case, although of no great benefit in several others. Cardiac decompensation has been treated by the approved methods, although excessive purgation has been very exhausting in some cases. X-ray treatment was used in many cases of hyperplasia before operation and in a few was the only local treatment employed. Radium emanations in bare tubes of 6-10 mc. were inserted into some of the more serious hyperplastic goiters with marked improvement. (These cases are being reported elsewhere by Dr. W. I. Terry.) Various methods of surgical treatment were employed, including ligation, enucleation of adenomata, partial lobectomy, bilateral subtotal lobectomy, etc.

One of the most striking observations made in this series of cases has been the degree of cardiac relief noted by the patient after removal of an overacting thyroid gland.

Prognosis—In our series it has been demonstrated that the condition of the heart generally determined the outcome of the case. Deaths from other causes, except marked increase of toxicity following operation in severe cases, were rare. Electrocardiographic demonstration of flattened or inverted T-waves in Leads I and II have indicated an unfavorable outcome. Heart block and disorders of the cardiac rhythm have been noted in the more severe cases. Signs of decompensation and advancing edema have indicated prolonged medical treatment or radio-therapy. Embolism and coronary disease were rare. Focal necroses of the liver and pancreas followed operation in one case and caused the death of the patient.

Mortality—In our series there were nine deaths, seven occurring in cases with hyperplasia, one with a mixed gland and one with an adenoma of the plunging type. In six of the nine cases death would be attributed to cardiac disease. In one of these there was embolism of the right subclavian artery. One patient had frequent attacks of angina pectoris and paroxysms of auricular fibrillation. In four cases auricular fibrillation was present at some time while under observation. Three cases presented unusual liver findings at necropsy and will be reported elsewhere at a later date. Two of the patients received medical treatment only.

CONCLUSIONS

The cardiovascular changes in thyroid disease are progressive, and in the most severe cases dominate the clinical picture.

The cardiac signs and symptoms in toxic adenomas and hyperplasias differ only with the degree of toxicity. The vascular changes are more marked in the cases of hyperplastic goiter.

Cardiac irregularities are more common than is generally recognized. Auricular fibrillation or auricular flutter, usually paroxysmal in type, occurred in about a third of all toxic cases. We believe that such paroxysmal attacks explain the periods of palpitation which are described by a large percentage of patients.

The prognosis depends in a large measure upon the condition of the circulation. If surgical treatment is to be carried out, the "time and extent of the operation should be governed by the circulatory condition."

Treatment of the thyroid heart depends on the stage of the disease. In all cases every measure should be employed to relieve the myocardium. Rest is essential. Sedative drugs are of some value. Elimination should be kept up. Digitalis is of great value in controlling auricular fibrillation and may be of value in preventing paroxysmal attacks. The amount required in controlling auricular fibrillation is usually less than in ordinary cardiac cases. It should be continued over long periods. Decompensation should be treated as in other myocardial cases.

The electrocardiogram is of value in recognizing myocardial changes in differentiating the types of irregularities and in prognosis.

STUDIES IN URETERAL CATHETERIZATION. PRELIMINARY REPORT *

By HENRY A. R. KREUTZMANN, M. D., San Francisco

Catheterization of the ureters is often accompanied by severe pain, hematuria and sometimes even by temporary anuria. In performing catheterization at the present time, it is customary to insert the catheters the entire length of the ureters so that the distal ends enter the renal pelvises. This is done in order to minimize the leakage of urine into the bladder and to prevent the catheter from being pulled out of the ureter on withdrawing the cystoscope from the bladder.

This study was undertaken in an attempt to determine whether or not the present disadvantages of ureteral catheterization could be overcome by inserting the catheters only part way into the ureters. The problem has not been solved but the investigations have brought out some interesting facts.

The technic used is as follows: The patient was subjected to catheterization three times, with an interval of one week between each operation. No. 6 ureteral catheters were used throughout. At the first sitting they were inserted five centimeters into each ureter, the second time fourteen centimeters and the third time the full distance into the kidney pelvis. One cubic centimeter of phenolsulphonphthalein solution was injected intravenously with a record syringe after the catheters were inserted. None of the patients were given water to drink after receiving the phthalein.

The appearance time was noted and two fifteen-minute specimens of urine were collected from each side. The cystoscope during this time was not removed. At the end of the half-hour test, with the catheters still in situ, the bladder was washed through the cystoscope until the irrigating solution failed to show a trace of phthalein. At the same time the position of the catheters was verified by looking through the cystoscope. The three distances chosen for inserting the catheters was with the intention of having their tips each time past one of the three anatomic points of constriction of the ureters. A Dunning calorimeter was used to make the phthalein determinations. The subjects used in this study had no known pathological condition of the kidneys, ureters or bladder, with the exception of two cases which had been treated previously for pyelitis.

The following points were noted at each level: the character of the urinary flow from the end of the catheters; the presence or absence of pain, haemorrhage and anuria; the appearance time of the dye; the amount of phthalein obtained from the catheters from the right and left kidneys over two fifteen minute periods; the entire amount of phthalein eliminated in half an hour and the amount of bladder leakage.

It soon became apparent that the same person did not excrete the same amount of dye at each of the three tests, therefore the bladder leakage was figured not in the percentage of phthalein which the calorimeter showed, but in percentage of the

total elimination for half an hour. As was anticipated, the farther the catheters were inserted into the ureters, the greater was the likelihood of having pain, haemorrhage and anuria. It always has been a mooted question whether or not the insertion of ureteral catheters has a stimulating or a depressing action on the kidneys. In our series of twelve cases, the average appearance time was less at five centimeters than at the other two levels. The total average phthalein output was less when the catheters were inserted their full distance than at five and fourteen centimeter levels. These two facts point to an inhibiting and not to a stimulating action of the catheters. In six of the twelve cases, with the catheters inserted five centimeters into the ureters, the phthalein leakage varied between 14.7 and 69.8 per cent. In the other six cases there was only a trace. Because of this great amount of leakage in half of the cases, accurate determinations of relative kidney function cannot be obtained when the catheters are inserted only a short distance into the ureters.

Contrary to all expectations, the amount of leakage did not decrease at the higher levels, but on the contrary, it increased progressively. It appeared that once the resistance of the first point of constriction, namely the uretero-vesical sphincter, was overcome, there was nothing to hold back the leakage. For example, Case IV showed no leakage at five centimeters. At fourteen centimeters the leakage was 8 per cent and at the full distance, the leakage was 42.8 per cent. This progressively increasing amount of leakage was constant throughout the series, with the exception of three cases. One of these three, and the only one in the series, showed a trace of leakage at all three levels. The other two were the cases which had been treated a short time before for an infection of the kidney pelvis.

From the information obtained in regard to the leakage, it appears that the only constriction of importance is the one at the junction of the ureter and the bladder, and that the passage of a medium sized catheter causes a passive dilatation of this sphincter. These facts are of practical value in comparative kidney tests, in pyelography and in pelvic levage. If it is necessary to repeat the comparative kidney function it should not be done until sufficient time has elapsed for the uretero-vesical sphincter to regain its tone.

Pyelography, when necessary, should be performed at the same sitting in order to have the minimum of leakage and insure a clean cut shadow of the kidney pelvis. When, as at present, pelvic levage is performed two and three times a week, we believe its chief value lies in the dilatation and free drainage which is produced, and not in the bactericidal action of the drug used.

SUMMARY

In ureteral catheterization, the occurrence of pain, haematuria and anuria increases in direct ratio to the distances which the catheters are inserted.

Catheterization as at present performed has most frequently a depressing action on the kidney function.

* Read before the Fifty-first Annual Meeting of the Medical Society of the State of California, Yosemite Valley, May, 1922.

Accurate information as to relative kidney function cannot be obtained if the catheters are inserted only a few centimeters into the ureters.

The only constriction of importance in ureteral catheterization is the one at the junction of the ureter and the bladder.

Passage of a medium sized catheter causes a passive dilatation of the uretero-vesical sphincter which lasts at least one week.

Repeated catheterization causes still greater dilatation of the sphincter with a further increase in the amount of leakage.

The points brought out in this study are of value in comparative kidney tests, in pyelography and in pelvic leverage.

SUMMARY OF THE TWELVE CASES INVESTIGATED

Distance Inserted	Pain	Hæm.	Anorh.	App. Time Min.	R. K. I. K. + Leakage	Bladder Leakage Per Cent
5 cm.	1	0	0	3.7	51	18.3
14 cm.	2	1	1	4.8	53.8	27.1
Full	4	3	1	4.2	46	30.1

(323 Geary Street)

The Maternity Welfare Law.—"We are glad that a paper on this important topic is to be read at our annual meeting, because renewed interest has been interjected into its study by the recently expressed opinion of the Attorney-General of Massachusetts that it is unconstitutional. Leaving this for the Bench and the lawyers to decide, our attention is seriously called to a study of what appears to be another blow on the entering wedge of state medicine started by the Narcotic law. If we permit our rights to be infringed repeatedly, we shall fall ere long into the degraded condition of the profession in foreign lands. . . . Some readers of the law claim that they do not see any harm in it, whilst its opponents want to know if there is any good in its provisions. They do not see how maternal mortality can be prevented or infantile care advanced by mere political investigations. They think that the attending physicians know more about their patients than the best of officials. Some say that it is dishonest for some States to steal from others, or to utilize for the benefit of their expectant mothers and newborn infants money extorted by taxation from neighboring States, as this law directs. . . . It is said, additionally, that the death rate in infants under one year of age is greater in Biddleford than in any city in the nation. If so, at whose door is the fault to be laid? It would seem better to save these infants first, and to print statistics to be forwarded to Washington afterward. It is said by friends of the law that there will be no house visitations and therefore no interference with our practice. If, however, there is no penalty attached to such visitations, they will soon be made, because they are indispensable to investigating studies to be sent to Washington. So, too, all laws can be amended, and when it is found that without visitations nothing is gained, amendments will make them compulsory. Our State Board of Health is not so overburdened with work that it cannot study maternal welfare right on the spot, and fully as well as when supervised at Washington. It is a confession of our weakness and imbecility to ask outsiders to do our medical preventive work."—(Maine Medical Journal, June, 1922.)

THE TREATMENT OF HYPEREMESIS GRAVIDARUM*

By G. CARL H. MCPHEETERS, M. D., Fresno, Cal.

As shown by the title, it is not the purpose of this paper to classify the toxemias of pregnancy, or to theorize regarding their etiology. It is merely intended to pass on to the profession what has been learned from practical experience in attempting to control what De Lee styles "the obstinate, the uncontrollable, the incoercible vomiting of pregnancy." The excuse for the paper, if any were made, lies in the fact that about one-half of all pregnant women suffer with nausea and vomiting during pregnancy. So common is it that the mass of the laity regard it as a normal accompaniment of pregnancy and do not know that any therapeutic relief can be obtained. How frequently one sees the expectant mother struggle in vain in the latter half of pregnancy to regain the flesh and blood she lost because of nausea and vomiting during the earlier months.

In considering the treatment, it is the practice of the writer to differentiate as sharply as possible between the mild and the severe type of vomiting in pregnancy. Suffice it to say that by the severe type is meant the toxic, or dangerous and frequently fatal type. Every patient reporting nausea or vomiting should be treated at once, even though her nausea is of the mild type, because one can never know beforehand that the mild type may not grow rapidly worse at any time and become toxic. Also, most observers agree unanimously that the nausea and vomiting of pregnancy yields best to immediate treatment and is less easily handled if there is delay in beginning remedial measures.

The treatment usually given to the mild type case is as follows: The patient is not kept in bed unless she is one whose nausea borders upon the pernicious, or toxic type. Every patient is requested to present a specimen of vomitus at the office for inspection and analysis, if practical.

An initial catharsis, consisting of calomel, gr. 1 to 1½ in ¼-gr. divided doses followed by magnesium citrate, oz. viii, is administered. The patient is advised to take the calomel in the forenoon and the magnesium citrate solution just before lunch or early in the afternoon of the next day, whichever suits her best. Patients not usually nauseated the first thing in the morning may take the calomel in the afternoon and the magnesium citrate solution on waking the next morning, an hour before breakfast.†

A few patients dislike magnesium citrate solution, but tolerate magnesium sulphate solution, one ounce following the calomel tablets. Some

* Read before the Sections on Obstetrics and Gynecology of the Medical Society of California, at Yosemite National Park, May 17, 1922.

† It is found that magnesium citrate solution is often tolerated best by the empty stomach when taken hot. The patient is instructed to open the bottle of magnesium citrate solution, pour the contents into a large, thin drinking glass and set the glass in hot water until the solution is as hot as can be taken readily. Patients are warned never to set the unopened bottle of solution in hot water, since an explosion may result either before or at the time it is opened. The escape of gas from the magnesium citrate solution on being heated in an open glass does not seem to lessen its cathartic properties.

patients who can not tolerate saline laxatives can use phenolphthalein quite successfully; others can use the combined calomel and phenolphthalein wafers with good results. Some initial enemata of plain boiled water containing soda bicarbonate 5 per cent are given before the calomel and saline laxatives. Patients reporting bile in the vomitus and whose specimens of vomited material show bile require this catharsis especially. In them also it is necessary to repeat the calomel and saline laxatives every second or third day to keep the bile moving onward rapidly through the intestine. Only when two or three days pass without vomiting may we safely forego laxatives for a few days. When a laxative is needed again it may be possible to use aromatic fluid extract of cascara, one to four teaspoonfuls at night, instead of the calomel and salines. Any subsequent vomiting of bile calls for a repetition of the small doses of calomel and the saline following. On days when no laxative is taken a cleansing soda enema should always be given at an hour best suited to the patient.

In the matter of diet every patient is a unique case. She has usually discarded most of the heavier foods before visiting the physician. In general, meat, cheese, eggs, beans, peas and other heavy protein foods should be eliminated at once. Also pastry and sweets, raw fruits and raw vegetables are forbidden. Those patients who retain one or two meals each day are instructed to take cereals with a little sugar and cream, milk, buttermilk, toast, crackers, the non-acid vegetables well cooked, and the mildly acid fruit juices from canned or freshly cooked peaches, pears, prunes or figs. Small portions of all foods are better tolerated than large portions. Patients who vomit breakfast only are instructed to omit breakfast at its usual hour and eat a light meal two or three hours later. Those who are hungry upon the limited fare allowed are told to take something, if only a glass of milk, or buttermilk, and a cracker every three or four hours. Five or six small meals daily are usually handled better than three larger meals. All the patients are instructed to drink two to eight quarts of measured water daily, depending upon the season of the year. Milk is best tolerated when diluted with lime water half and half. Also in this way some calcium is supplied the patient. Buttermilk, either plain or with the addition of a little sugar, or salt, is tolerated by some who can not take sweet milk; also freshly coagulated (clabbered) sour milk with a sprinkling of sugar is relished by an occasional patient who dislikes fresh milk. Bouillons, chicken broth with rice or barley, lamb broth, baked potatoes, spinach, fresh or canned, tender chicken, white fish, such as halibut, are gradually allowed to the patient who has ceased vomiting for one week. The patient must co-operate by adhering strictly to her diet schedule. Written instructions from the physician are indispensable.

Regarding medicines, few are given by mouth, except laxatives as outlined. Those having marked hyperacidity persisting after free catharsis are given a capsule containing extract *nux vomica* gr. 1/6, rhubarb gr. 1/2, soda bicarb. gr. iii and mag-

nesium oxide gr. ii, one, two or three capsules before or after meals, which are usually retained. When capsules can not be swallowed, or retained, the above prescription may be given in liquid form, using three to five drops tincture *nux vomica* instead of the extract *nux vomica*. In addition to lime water given in milk, lime may be given by mouth in the form of the liquid hyposulphites of lime and soda to which is added Fowler's Solution in three-drop doses for the anemia. Calcium may also be given the patient subcutaneously in the form of Locke's Solution, if thought desirable.

As a routine, the writer is trying soluble extract *corpora lutea*, 1 cc. ampules injected in the median basilic vein near the elbow once or twice daily. In more severe cases 2 cc. of the *corpora lutea* ampules are injected twice daily. From one to two dozen ampules are thus injected during the first three weeks after the patient presents herself. The extract *corpora lutea* may be injected in the gluteal or thigh muscles in patients not having accessible veins, but the preparation is irritating when used in the muscle. Whether the action of extract *corpora lutea* is suggestive, as De Lee supposes, or whether it does supply what the corpus luteum of pregnancy does not supply, as Hirst believes, is not known or proven. The writer, however, has no doubt of its definite value in scores of cases of hyperemesis gravidarum, in many of which it was the only treatment given. Further proof of its value is seen in those patients whose treatment with extract *corpora lutea* was interrupted after they had ceased to vomit for some days, but before they were well enough to eat a full diet. These patients invariably resumed vomiting and required one-half to one dozen or more injections.

It is well to warn the patient who has just ceased vomiting and begins to have some appetite that she must continue treatment until able to eat a full diet in order to be reasonably safe from disappointing relapses. Such relapses may carry the patient over into the class of severe or toxic cases. For anemia these patients are given iron and sodium cacodylate in addition to the Fowler's solution previously mentioned. Iron cacodylate, 1 cc., is given in the vein or in the muscle daily or on alternate days, as best tolerated. One to two dozen injections of iron cacodylate are given. The more anemic patients should also receive 1/2 gr. sodium cacodylate, alternating with the iron cacodylate. Most gratifying improvement in the red blood count, the hemoglobin and the blood pressure will occur within a month after the patient presents herself. Patients having focal infections will show less rapid blood improvement.

The eradication of focal infections is the most vital part of the treatment of hyperemesis gravidarum. The patient and her family often object to this most seriously, and it should not be undertaken lightly by the physician. Co-operation of a competent nose and throat specialist and a dentist, whom the patient trusts, is indispensable. Radiographs of all the teeth are made as a routine. Cultural evidence from nose and tonsillar crypts

is often of service in showing the patient that serious infection exists. In the routine search for foci of infection the ear, the cervix uteri, the anal margins, the urinary tract and Bartholin's and Skene's glands should not be overlooked.

In the practice of the writer more than half of all patients who vomit in pregnancy exhibit focal infections; and of those having focal infections nearly all are found to have pathogenic bacteria in their catheterized urine. The co-operation of the urologist is of immense value in these cases.

The proper time to remove foci of infection in the nauseated patient is the first day when her condition will safely permit the procedure required, or as soon as her consent can be obtained thereafter.

The above treatment shortens the mild type of vomiting in pregnancy from its natural duration of two, three or four months to one, two or three weeks in most cases. It is unusual for any vomiting to occur after the second week. Treatment is usually continued four or five weeks in order to prevent relapse.

In considering the treatment of severe or toxic type of hyperemesis gravidarum, no description or attempt at classification will be set down here. These patients are invariably kept in bed. Those having a frank nephritis with or without hypertension, especially when the nephritis is accompanied by cardiac decompensation, should receive therapeutic abortion. Also the occasional patient who is tuberculous should be aborted without effort at other treatment for her vomiting. Patients showing no nephritis or tuberculosis have an encouraging outlook.

After the patient is secluded in a quiet room in her home, in a maternity, or, best of all, in a hospital, she is at once given extract corpora luteum, 1 or 2 cc., twice daily in the vein. The next step in treatment is the administration of copious sodium bicarbonate enemas. After an ordinary cleansing soapsuds enema has come away, two quarts of hot alkaline solution are administered slowly with a long colon tube, the patient in Sim's position on her right side. She is urged to retain as much of this as possible, just as long as she can. This is repeated night and morning for two or three days, longer if it can be tolerated by the bowel. During the first twenty-four hours a vigorous scrubbing of the teeth and tongue with the toothbrush is in order, using hot soda bicarbonate solution as a mouth wash. The foul taste in the mouth and offensive odor of the breath are often relieved at once. Severe cases often have an acetone odor to the breath, which persists until the patient begins to assimilate some nourishment. After the first day of fasting and enemas, the nurse offers the patient 8 to 12 ounces hot 5 per cent sodium bicarbonate solution on waking in the morning each day. This is commonly vomited, the vomitus containing a little bile-stained mucus. After vomiting the soda solution the patient should suck a $\frac{1}{4}$ -grain calomel tablet and remain absolutely quiet for one hour. Then hot lime water, ounces 2, containing fresh whole milk, ounces 1 or 2, or malted milk, 1 teaspoonful, is offered to be sipped slowly through

a tube without moving in bed. Some patients tolerate this better when given ice cold, especially in warm weather. Part or all of this may be vomited. It is surprising to everyone how often it is retained. Later in the day the lime water and milk may be repeated, or plain lime water containing the beaten white of an egg and a few drops of lemon juice. After two or three days of this the patient is placed gradually on a three or four hour feeding schedule, ounces 4 to 6 of lime water and milk mixture being most often given. Albumin water is better tolerated than plain water and quenches the thirst. As it is tolerated the milk may be increased until ounces 2 to 4 each of milk and lime water constitute a feeding. This point is sometimes reached in three to five days, the patient continuing to vomit once or twice daily, however. After two or three days' treatment a laxative must be tried. For this purpose $\frac{1}{4}$ -gr. calomel tablets are given during the day, 1 gr. in all, and phenolax wafers, 3 to 6 in the evening. The results are uniformly satisfactory next day. After free catharsis the patient's fever often disappears and she feels much better.

The most severe cases will require gastric lavage with the stomach tube daily for many days before they can retain anything by mouth. After such lavage it is wise to deposit olive oil, ounces 2, containing castor oil drams 4, in the stomach, or a simple saturated magnesium sulphate solution, ounce 1, well diluted.

In the severest cases also rectal medication is often effective. After the usual morning soapsuds enema for cleansing, ounces 4 to 6 of hot water containing chloral hydrate, gr. 10, sodium bromide, gra. 20, and sodium bicarbonate, grs. 30, is deposited high in the bowel with the colon tube. The patient is admonished to lie quietly and retain it. This may be repeated at bedtime. Often the patient will obtain the first restful sleep in many days after this medication. In those cases suspected of having a thyroid deficiency large doses of thyroid gland may be administered in the above rectal medication. Feeding may also be carried out to a very limited extent per rectum, the most useful things being glucose solution 5 to 15 per cent in a small amount of milk. Both rectal medication and feeding are limited to use for three to five days only because of a gradually increasing irritability of the bowel. The occasional patient who dislikes milk in any form is a unique problem when vomiting in pregnancy. For her malted milk can be made up with water in place of milk, also malt soup, potato soup, pearl barley soup, albumin water or ice water, cereal gruels, cocoa and tea are useful, with lime water whenever it can be introduced. Calcium may be administered to these patients in the form of Locke's solution subcutaneously once or twice a day. Patients having extremely scanty urine are greatly benefited by the Locke's solution and also by physiological salt solution, if one is sure there is no nephritis. After one, two or three weeks of the above treatment, the most severely toxic patient is generally able to eat one or two light meals each day and retain them. The occasional hopeless case is apparent after one week

of faithful effort upon the part of nurse and physician.

CONCLUSIONS

The importance of hyperemesis gravidarum is urged by the writer because of the fact that one-half of all pregnant women suffer from it.

For purposes of treatment, the simple differentiation between mild and severe or toxic cases is sufficient.

All nausea and vomiting of pregnancy, however mild, should be treated carefully in the hope of preventing the development of pernicious or toxic vomiting with its terrible results.

The treatment of the mild type may be carried out in the physician's office, or in the home of the patient.

The treatment of the severe or toxic case should be carried out in a maternity, or a hospital, and the patient's family should be given to understand the gravity of the condition and the necessity for the utmost care.

An earnest appeal is made to the profession for more detailed attention to the treatment of hyperemesis gravidarum.

(1021 Mattel Bldg.)

DISCUSSION

L. G. McNeile, Los Angeles—The last thing that Dr. McPheeters said in connection with fifty per cent of all women having hyperemesis gravidarum I may have misunderstood. I think that is a mistake because hyperemesis gravidarum is toxic vomiting and we believe that fifty per cent of all pregnant women do have some vomiting, but we do not believe that they have toxic vomiting. I would say closer two, three, and the highest five per cent. We believe from our results in the South that you will get some results in about fifty per cent of cases if the patient is not a toxic case, by the use of corpus luteum as the Doctor advises. Fifty per cent of our toxic cases do not respond to corpus luteum by mouth or hyperdermically. In our toxic cases of vomiting we feel the importance of a patient fasting not less than seventy-two hours. Put the patient on sodium bromide by drop method, nothing by mouth, and give cleansing enema once or twice daily. We are very much interested at the present time in results of Titus' investigation regarding the use of glucose in various toxemias of pregnancy. I have used it in a few cases. Titus has published in the Journal of the American Medical Association of January, 1922, a series of approximately 150 cases of true pernicious vomiting, confirmed by laboratory examinations in which he only had to abort one case. Intravenous use of glucose has given good results in our hands. Only few have been tried but they seemed to confirm his results. Dr. McPheeters' paper shows a world of work and I wish to congratulate him for what he has done.

H. A. Stephenson, San Francisco—I haven't seen as many cases of pernicious vomiting as I would like to from a standpoint of experience, but I have not followed the line of treatment as outlined by Dr. McPheeters. I belong to that group that is somewhat at variance with his method of treatment in regard to diet. My experience is that, certainly 72 or even 120 hours of absolutely nothing by mouth gives better results in severely toxic cases than attempting to give them especially liquid or soft diet. It doesn't seem that it is very difficult to have soft or liquid diet returned, but it does seem to me that there is considerable more difficulty in having the patient bring up heavy foods such as outlined by Lynch in his treatment in this type of case. In all of my cases who have

been very sick, as confirmed by laboratory tests, we have found that absolutely nothing by mouth, isolation from the patient's family immediately, under the strict supervision of a nurse, with perhaps the offering of food around the fourth or fifth day, meets with better success than trying to give liquid or soft diet. One interesting case has been aborted eleven times for pernicious vomiting, not by me but by other doctors. In spite of her repeated hyperemesis, laboratory tests did not show any toxemias. We believe that she was neurotic, because a great many of these patients do get the habit. One thing leads to another and soon the patient believes she cannot retain any food. After not allowing her to have any food for four days she asked the nurse for a hot water bottle. When the nurse removed the hot water bag, the hot water was gone. She was able to retain more or less of the hot water and after that we had no trouble. She gave birth to her first baby with her twelfth pregnancy. That may be an extreme case, but I do believe that fasting which Dr. McNiele has mentioned, with bromides rectally and alkaline and sugar solutions, we have used lactose rather than glucose, has given satisfying results. As to drugs in the mild cases, I have not been using the treatment outlined by Dr. McPheeters, but I have combined chloral hydrate, codeine, and extract of belladonna, which we have found to be the most efficient of all drugs to be used by mouth. Corpus luteum given intravenously will give results in about one-half of the cases. I think with De Lee that a good many of the mild cases are pure neurotics and that may be demonstrated by the fact that a patient who says she can retain nothing when suddenly taken to a hotel and set before a big meal will be able to retain it. It is rather embarrassing not to retain it. Therefore, I believe that the way to treat these cases is by isolation, especially from the patient's family, strict supervision professionally, with treatment per rectum with alkaline and sugar solutions, generally is preferred until we determine after four or five days whether it is a true toxic case. The only treatment for true toxic cases, I believe, is a therapeutic abortion.

Margaret Schultze, San Francisco—At the University of California our treatment consists of isolation of the patient from her family cares and duties and placing her under the care of a special nurse. Nothing is given by mouth for usually 24 hours after the last time that she vomits, ordinarily that is about 48 to 72 hours. She is given at that time glucose and soda by rectum and is given large doses of bromides. Bromide is the only drug ordinarily used. The diet is then gradually begun 24 hours after the last vomiting and consists ordinarily of meat. Ordinarily, the first thing that is given is very hot steak, a small portion which is freshly cooked, and very hot. The patient is given at this time, also, some very crisp, dry bread, toasted, and is given a small amount of milk and cream. It is insisted very firmly that she must take all of this diet or she cannot have any. She is not allowed to choose. The psychic control is a very important feature. She must be made to understand that it can be controlled. At the beginning the diet is given usually about four times a day in small amounts and gradually increased. Acid fruits and acid vegetables are not added at any time, but certain vegetables may be given later on, green vegetables particularly. Results have been remarkably good. I have seen a great many treated and very few have not responded very quickly. In very severe cases abortion must be undertaken early.

Hamilton, Oakland—In January I had a patient to whom I gave corpus luteum, to which she responded. She vomited again and I again gave her corpus luteum and she once more responded. The next time I saw her personally, I gave her corpus luteum hyperdermically, intramuscularly and intravenously, and she came around a

little. A week before I came up here she began to vomit and again I gave her corpus luteum. We dilated the cervix enough to introduce a soft catheter equal to a colon tube, which turned on itself and was packed with gauze for twenty-four hours. Her blood count showed 17,800 white cells. The temperature was normal, 99, and pulse 100. Urine had X albumin and XXX casts. On the second day she had XX albumin. Three different urinalyses were done. She steadily improved from the time of putting in this large tube and we then gave her soda bicarbonate and glucose. I think there may have been some scar tissue in the cervix.

A. L. Munger, San Francisco—Dr. McPheeters mentions anemia. I do not know whether it is because in the last few years we have been making more careful examination of the blood or not, but at least the last couple of years I have been tremendously impressed with the pregnancy cases that were running a haemoglobin of 70% or under. I, like Dr. McPheeters, have gotten some very good results with the use of arsenic, but now use more Fowler's solution. With reference to infection, last year we had in the Clinic a U. C. man by the name of Dr. Nobbs who went over our patients' teeth very carefully. A large number of these were having difficulties of one sort or another. They got a tremendous amount of relief by having their mouths cleaned up. A large large number was also referred to the Nose and Throat Clinic. Occasionally one will find that these patients have cervicitis. Focal infection is something that should be seriously considered. In regard to my experience with corpus luteum, I have not had very good results in this respect. I would like to hear what somebody else thinks about it. In the majority of patients that I have given corpus luteum I have knocked the systolic blood pressure down to 100 and the patients have been so miserable from the hypotension that they were worse off than with their vomiting and refused to take any more corpus luteum.

I am tremendously interested in sterility, because it is a known fact that the native American woman is bearing fewer and fewer children as the decades go by. If she continues in her present rate of decrease, there will be no children born after a few more generations, and therefore I am interested in increasing the birth rate in California. We should do anything we can in the medical profession to encourage women to bear children. My paper last year at Coronado was designed for that purpose. I think if we can save babies from needless sacrifice and every woman from needless suffering during pregnancy we shall do a great deal to encourage the birth rate in California and in other States.

It is my belief that all vomiting of pregnancy is a toxic thing. I don't think there is any difference between the mild type and the severe type except in severity. I don't think there is any difference at all in the chemistry or biology of the thing except in the degree of severity. That all vomiting is toxic is my firm belief, and I think it will be proven. Those gentlemen who discussed the paper believe that 50 per cent only respond in general to corpus luteum. I think in many cases they did not give enough corpus luteum. I thought corpus luteum was of no value myself when I began using it, because I was content with giving half a dozen injections, and if the patient did not vomit for a day I stopped giving it and thought she was well. You must continue to give large amounts. If it reduces the

blood pressure do not be discouraged; it will come up if you correct your anemia. In my cases, now numbering 1,000 (just before I came up to this meeting I passed the one thousandth case), in the treatment of hyperemesis gravidarum of pregnancy, or if you wish to call it something else, in the nausea and vomiting of pregnancy, in those I believe I have gotten 80 per cent of benefit from corpus luteum. I won't say that is what cured the patient or remedied her permanently, but I will say it benefited her because the other treatment was used along with it in most of the cases.

I regard the use of sodium bromide as excellent, but I would like to inquire of the gentlemen, why starve the patient two or three or four days longer? It has been my experience that the pernicious vomiting case has usually been starved pretty thoroughly for one week or two before she calls to see me. I tell the patient to call me at once the first day she is nauseated, but they will wait two or three weeks and vomit until they have an acidosis, if you please, and I inquire why starve them any longer? There is nothing in the stomach but mucous and bile; the patient has a fruity odor to the breath; she has lost from twenty to thirty, and in one case, thirty-nine pounds in the two weeks previous. Shall we starve her four days more? Let us begin to feed her something right away. She has dried out her body of all its fluids until her haemoglobin test is lowered and the viscosity is greatly increased. I think it is important to feed that patient liquids and as soon as possible solid foods. I like very much the remarks of the doctor on the psychic control of her patient, but I could not, for want of time, say anything about that, but it is well known that many of these cases would vomit from psychic causes and can be controlled especially by suggestion.

I am sorry that I cannot answer the question of Dr. Hamilton regarding scar tissue of the cervix. I think some one of the gynecologists could answer that.

Some Comparative Results in Cities and in Counties as Health Units—The fundamental principles involved in the prevention of typhoid fever, A. J. Warren, Topeka, Kan., says, are the same for the country as for the city, and they are the same the country over. The same is true of smallpox, diphtheria, infant mortality, and other diseases concerning which we have fairly accurate knowledge. The only difference is in the practical application of the fundamentals involved to the given area. And even here differences are apparent only in the execution of the details, and are not general. Natural factors also favor the country dweller, and the present conditions are a reproach to our lack of efforts and intelligence. An effort was made to determine the relative cost of, and effectiveness of, public health work in urban and in rural communities. A survey covering three cities and nine counties, all having well organized health departments, was undertaken. The evidence submitted proves, conclusively, nothing. It does, however, suggest that the charge that rural health work is more expensive and difficult than urban health work needs modification, if not a complete withdrawal.—*Journal A. M. A.*, July 29, 1922.

EDITORIALS

NEW OFFICES OF THE STATE SOCIETY

The Society was notified on July 11, 1922, by the agents of the Butler building that the rent would be materially increased, and in order that the present offices might be held a lease for three years would have to be signed (in our case) by individual doctors. The general counsel for the Society refused to give his permission for the signing of such a lease by individuals, and, inasmuch as the lease could not be signed, the Society was compelled to look for other rooms.

Suitable offices have been found in the Balboa building, rooms 1015, 1016 and 1017, at Second and Market streets, just below the Palace Hotel, where it has been found that three rooms will suffice—four being occupied in the Butler building—at a material reduction in rental. In the new offices it will be feasible to use one less telephone than we are using at present, so that the move from all standpoints is advantageous, as the League for the Conservation of Public Health is at present located in this building because of the same circumstances.

THE PHYSICIAN AND "PRIVILEGED COMMUNICATIONS"

The confidences between patient and physician in all countries and in all times have partaken somewhat of the confessional. In most civilized countries and in practically all so-called non-civilized countries these confidences have been and are respected by law. In some of the States of the United States a physician is not permitted to testify as to knowledge obtained in his professional capacity. In other States and in other countries only certain classes of information are covered by the "privileged communication" provision of the law. In a few cases privileged communication is not recognized and physicians are required to testify regardless of the injury that such testimony may do to patients and family and regardless of the manner in which their information is received. This problem in general has been very well taken care of until the last few years. The development of State medicine and socialized medicine in its various forms struck a great blow to privileged communications between physician and patient. This is well illustrated in the Workmen's Compensation and Industrial Insurance Acts in various States. Other laws have been passed, one after the other, which in the aggregate have constantly restricted privileged communications, confidences that should be sacred between the sick patient and the physician. One of the latest inroads into this sacred covenant has been found in Great Britain, where it is generally known that State Medicine is in full bloom, so full in fact that most of the attractive petals are withered and falling from the flower. The British Medical Association in its recent convention condemned the destruction of the principle of the sacred covenant between

patient and physician in measured terms. They recommended passage of legislation restoring to physicians of Great Britain the right to receive the confidence of their patients and to keep such confidences inviolate.

The Anti-Vivisectionists—The anti-vivisectionists are at it again. They have an initiative measure on the ballot this fall under which you may not perform an experiment on an animal, even under anesthetic or without pain, if the purpose is scientific investigation, but you may cut an animal open, mutilate or burn it, painfully and without anesthetic, if the purpose is convenience in farming. The law expressly says both of these things, in direct language. Animals may be caught alive, in steel traps, or shot and wounded, for sport or profit; they may be killed for food, painfully; they may be branded with hot iron, to identify them as property, or dehorned, gelded, spayed, castrated or caponized, without anesthetic, for convenience or luxury, and there is no law against it. In fact, these farming operations are expressly permitted, in this language, by the law. But the surgeon with a delicate and perhaps new operation to perform may not perfect his technique by doing it first on an animal, even under complete anesthesia. No drug may be tested, by administering it to an animal, first. No serum, to protect children against diphtheria, or even to protect other animals against anthrax or hog cholera, can be manufactured or tested.

A human being bitten by a mad dog must die of hydrophobia since the only known treatment involves inflicting a needle-prick on a rabbit, and this is forbidden. The botulinus investigations, without which the California fruit-canning industry would be ruined, are forbidden. It is forbidden to investigate the poisoning of orchard pests or their extermination by their natural enemies, or even to make experimental investigation of the diseases of plants. Present methods of combating anthrax and hog cholera are made penal offenses, and the treatment of diphtheria, lockjaw and meningitis by the methods approved by modern science are forbidden. The teaching of medicine, physiology and biology in the universities of California is made impossible. And a thousand other things, equally absurd.

And all this, not to protect animals from pain—since animal experimentation is prohibited even when there is no pain, while the infliction of pain is permitted, if it is for other purposes—but to prevent scientific investigation.

The thing is almost unthinkable preposterous. No such law exists or has ever been seriously proposed in any civilized country. And yet there will be a real crusade for it, by people who think they are sincere, in California.—Chester Rowell, in S. F. Bulletin.

NEW MEDICAL JOURNAL

A new medical Journal, known as the "American Medical Press," a monthly medical publication, came off the press in June. This Journal emphasizes the importance of medical economics and the duty of the physician as a citizen. Dr. F. H. McMechan is editor; Harvey S. Knox, business manager. The Journal is published by the New York Press, 280 Broadway, New York City.

Thank You—Dear Doctor Musgrave: Just a note to congratulate you upon having accomplished the Herculean task of shortening the papers in the California State Journal. I think it must increase the interest in the Journal, and it will enable many more to be heard when they want a hearing. I noticed a while back one of the Canadian Journals has a large number of articles, all about a page and a half long.—Walter C. Alvarez

STATE SOCIETY

CODIFICATION OF THE CONSTITUTION AND BY-LAWS OF THE CALIFORNIA MEDICAL ASSOCIATION

In compliance with the Constitution and By-Laws and with the resolution of the House of Delegates, the following report of the Committee on Codification of the Constitution and By-Laws is published. The second notice required by the Constitution will be published later in the year.

It is recommended that members read this proposed codification in connection with the existing Constitution and By-Laws and make any desired suggestions to the Secretary for transmission to the Council.

CONSTITUTION

ARTICLE I Name and Object

Section 1. The name of this Association shall be the "California Medical Association."

Sec. 2. The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of California, and to unite with similar societies of other states to form the American Medical Association and such regional associations as the House of Delegates may deem advisable; to extend medical knowledge and advance medical science; to elevate the standard of medical education and practice, and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of medicine and public health, so that the profession may become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in the prolonging and adding comfort to life. This Association as a constituent unit of the American Medical Association hereby recognizes and pledges its support to the Constitution and By-Laws of the American Medical Association and rulings by competent authority thereof.

ARTICLE II

Component Societies

Component societies shall consist of those county, district and other constituent societies which hold charters from this Association and whose Constitution and By-Laws, rulings, activities and procedure are not in conflict with the Constitution and By-Laws and decisions of competent authority of this Association.

ARTICLE III

Members

Section 1. Members—The members of the Association shall be the members of the component district, county and other constituent medical societies and associate members of this Association as provided in Section 2 hereof.

Sec. 2. Associate Members—Associate members shall be elected from those persons who by education, training and experience in sciences so closely allied to medicine as to make their affiliation with this Association desirable in the opinion of the Council. They shall be elected by the Council. Associate members shall pay such annual dues and enjoy such rights and privileges as the Council shall from time to time prescribe.

Sec. 3. Inactive Members—Inactive members shall be elected from those doctors of medicine eligible for active membership, but who are for any reason satisfactory to the Council of the constituent society and the Council of the State Association, entitled to special consideration. These members shall have all the rights and privileges of other members, except medical defense, and shall pay nominal dues of one dollar a year to the constituent society and one dollar a year to the State Association.

Sec. 4. Persons eligible for membership and inactive membership under the provisions of this Constitution are not eligible for any other type of membership either in the constituent or State society. Honorary membership is limited to and in addition to active or inactive membership in State and constituent societies.

Sec. 5. Guests—Any person may become a guest during any annual meeting, on invitation extended by the Secretary with the approval of the Council or the Executive Committee. Guests shall be accorded the privilege of participating in all of the scientific work for that meeting.

ARTICLE IV

House of Delegates

The House of Delegates shall be the legislative body of the Association, and shall consist of (1) Delegates elected by the county, district and other component societies, (2) the Councilors, and (3) ex-officio, the President, President-elect, Vice-President and Secretary of this Association.

ARTICLE V

Meetings

Section 1. The regular meetings of this Association shall be held annually at such times and place as the Council shall fix; and notice thereof shall be published

in the Journal of this Association in at least two regular issues preceding such regular meeting.

Sec. 2. Special meetings of the House of Delegates may be convened as the By-Laws provide. Twenty-five members shall constitute a quorum in the House of Delegates.

ARTICLE VI

Officers

Section 1. The officers of this Association shall be a President, a President-elect, a Vice-President, a Secretary, and fifteen Councilors, of whom one shall be elected from each of the nine Councilor districts and six at large, two of whom shall be elected from the County of Los Angeles, and four from the remainder of the State. Not more than three Councilors shall be elected from any one Councilor district. These officers shall be elected by the House of Delegates at the time and in the manner provided in this Constitution and the By-Laws.

Sec. 2. The officers, except the Councilors, shall be elected annually. The terms of the elected Councilors shall be for three years.

Sec. 3. The Association shall elect a President for the next succeeding year who shall remain President-elect for one year preceding his assumption of the office of President. While President-elect he shall be ex-officio a member of the Council and of all other bodies and committees of which the President is an ex-officio member.

Sec. 4. No delegate shall be eligible to any office named in the preceding section, except that of Councilor, and no person shall be elected to any such office who has not been a member of the Association for two years next preceding his election.

ARTICLE VII

Council

The Council shall consist of the elected Councilors and the President, the President-elect, the Vice-President and the Secretary, ex-officio. Besides its duties mentioned in the By-Laws, it shall constitute the Finance Committee of the House of Delegates. Five Councilors shall constitute a quorum.

ARTICLE VIII

Section and District Societies

The Council shall provide for a division of the work of the Association into appropriate sections, and shall assist in the organization of such district societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county or other constituent district societies.

ARTICLE IX

Funds and Expenses

Funds shall be raised by equal per capita assessments upon the active members of each component society. The amount of assessments shall be fixed by the House of Delegates by a two-thirds vote thereof of those present. The fiscal year of the society shall be from January 1 to December 31. The number of members in good standing in each component society on the first day of March of each year shall be taken as the basis for the assessment for that fiscal year.

ARTICLE X

Referendum

The House of Delegates, in regular or special session assembled, or the Council, may by a two-thirds vote submit any question in such form as either of said bodies approve, to all of the members of the Association by mail, and a majority of the vote so cast by mail by the members of this Association shall bind the Association and all constituent societies thereof upon the question presented.

ARTICLE XI

The Seal

The Association shall have a common seal, with such inscription thereon as the Council shall prescribe.

ARTICLE XII

Amendments

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates present at any annual meeting, provided that such amendment shall have been presented in open meeting at the previous annual meeting, and that it shall have been published twice during the year in the Journal of this Association, or sent officially to each component society for at least two months before the meeting at which final action is to be taken.

BY-LAWS

ARTICLE I

Membership

Section 1. All members of county and other constituent societies, except associate or honorary members, shall by virtue of such membership, be members of this Association upon certification by the Secretary of the component society of such membership and the receipt of the assessment for the fiscal year.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings, nor receive its publications, until he has been relieved of such disability.

Sec. 3. It shall be the duty of the Secretary of each component society to furnish the Secretary of this Association before the first day of March of each year a list by names and addresses of all members in good standing on the first day of January of each year, and

to notify the State Secretary monthly of all changes in membership of the constituent society, with corresponding change of address.

Sec. 4. Any physician residing in a county in which there is no county or other constituent society may make application for membership to the county or other constituent society nearest to the county in which he resides, or which he can most conveniently attend.

ARTICLE II Meetings

Section 1. The annual meeting of this Association shall be held at such time and place as the Council shall appoint.

Sec. 2. Special meetings of the House of Delegates may be called by the President upon request so to do by a majority vote of the Council, and shall be called by him upon the written request of at least twenty delegates, provided that each delegate is notified as to time, place and object of the proposed meeting, by written notice, given at least ten days prior thereto.

Sec. 3. General Sessions, Sessions of the House of Delegates and Section Meetings—the time for the convening of each thereof, the number of meetings, duration and place thereof, shall be fixed by the chairman of the committee on scientific program, with the approval of the Council.

Sec. 4. The Association in general session assembled may instruct the House of Delegates to appoint committees or instruct officers in any matter of special interest and importance to the profession and to the public.

ARTICLE III House of Delegates

Section 1. The House of Delegates shall be the legislative body of the Association, and shall consist of the officers of the society and delegates representing each component society.

Sec. 2. Each component society shall be entitled to send to the House of Delegates each year one delegate and one corresponding alternate for every fifty members, and one for each major fraction thereof, provided that each component county or other constituent society which has made its annual report and paid its assessment, as provided in this Constitution and By-Laws, shall be entitled to one delegate and one alternate.

Sec. 3. Twenty-five delegates shall constitute a quorum.

Sec. 4. Delegates and alternates shall be elected for a term of two years, and those societies entitled to more than one representative shall arrange such election so that one-half of their delegates and alternates, as near as may be, shall be elected each year.

Sec. 5. The House of Delegates or the Council shall approve all memorials and resolutions of whatever character issued in the name of the Association before the same shall become effective.

Sec. 6. The sessions of the House of Delegates shall be open to all members of the Association.

Sec. 7. The House of Delegates shall have authority to appoint committees for special purposes from among members of the Association who are not members of it. Such committees shall report to the House of Delegates, and may be present and participate in the debate on their reports.

Sec. 8. The House of Delegates shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body.

ARTICLE IV Duties of Officers

Section 1. The President shall preside at the meetings of the Association and of the House of Delegates; he shall appoint all committees not otherwise provided for; and perform such other duties as custom and parliamentary usage may require.

Sec. 2. The Vice-President shall assist the President in the discharge of his duties and act for him in his absence.

Sec. 3. The Secretary shall attend the general meetings of the Association; the meetings of the House of Delegates and of the Council, and shall keep the minutes of their respective proceedings. He shall be ex-officio Secretary of the Council. He shall be custodian of all records, books and papers belonging to the Association, and shall keep account of and promptly turn over to the depositary all funds of the Association which come into his hands. He shall provide for the registration of the members and delegates at the annual meetings. He shall, with the co-operation of the secretaries of the component societies, keep an approved register of all the members of the Association by counties, noting on each his status in relation to his county or other constituent society. He shall aid the Councilors in the organization and improvement of the county and other constituent societies and in the extension of the usefulness of this Association. He shall conduct the official correspondence, notifying members of meeting, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the Council, and shall make an annual report to the House of Delegates. He shall supply each component society with the necessary blanks for making its annual report; he shall keep an account with the component societies, charging against each society its assessment, collect the same and promptly turn it over to the depositary. He shall in like manner keep an account with each member as to any assessment or assessments levied directly upon each member, collect the same and promptly turn it

over to the depositary. As chairman of the committee on scientific program, he shall prepare and issue all programs. He shall perform such other duties as the Council shall direct. The amount of his salary shall be fixed by the Council.

Sec. 4. The depositary of the Association shall be a bank or trust company to be selected by the Council. All funds received for the Association by any officer or agent thereof shall be promptly deposited with the depositary. The depositary shall pay out the money of the Association only upon a check or draft signed by the Secretary and countersigned by the chairman or other designated member of the Council. The Secretary shall issue such checks or drafts only upon vouchers approved by the Auditing Committee and signed by all the members thereof. A revolving fund in such amount as may from time to time be fixed by the Council shall be left with the Secretary, from which fund immediate cash demands shall be paid.

ARTICLE V Council

Section 1. The Council shall meet on the day preceding the annual meeting and daily during its sessions, and it shall also hold at least three other meetings during the year, at least one of which shall be held in the southern part of the State. Special meetings may be called by the chairman at any time, and he shall call a special meeting upon the written request of at least three councilors, provided written notice for not less than three days of the time, place and object of the proposed special meeting be given by the secretary. At the meeting held on the last day of the annual meeting of the Association the Council shall reorganize and shall elect a chairman for the ensuing year. Its chairman shall make an annual report to the House of Delegates of its proceedings.

Sec. 2. The Council shall have power to invest the funds of the Association, and to do and perform all acts and transact all business for and on behalf of the Association when the House of Delegates is not in session. It shall also have power to delegate such powers and duties as it may determine to the Executive Committee hereinafter provided for.

Sec. 3. In the event of a vacancy in the Council, or in the office of the Secretary, or in any elective or other office not otherwise provided for, the Council shall fill the vacancy until the next annual election or other regular selection, as provided for in the Constitution and By-Laws.

Sec. 4. The Council shall provide for the publication and distribution of a periodical to be known as the "Journal of the California Medical Association," or some similar title to be determined by the Council, and such other publications as may be necessary, and shall have authority to employ at such salary as it may deem proper, an editor, who shall be responsible to the Council, and who shall properly edit and conduct the official journal and such other publications as may be authorized by the House of Delegates or the Council.

Sec. 5. The Council shall secure the services of competent public accountants and cause them to audit the accounts of all officers, committees and agents of the Association at least once a year, and shall present such report to the House of Delegates.

Sec. 6. The Council shall divide the State into Councilor districts, according to the number of districts fixed by Article VI, Section 1, of the Constitution, specifying what counties each district shall include. Whenever the number of delegates, as provided in Article III, Section 2, exceeds one hundred, it shall make a reapportionment that shall bring the number of delegates within this limit, after carefully examining the membership list of component societies to determine therefrom the number of delegates in excess of the one delegate to which each county or other constituent society shall be entitled. Such reapportionment shall take place at the annual meeting next succeeding that at which the reapportionment is approved by the House of Delegates.

Sec. 7. The Council shall, upon application, issue charters to county or other constituent societies organized to conform to the letter and spirit of the Constitution and By-Laws, rulings and regulations of this society, and such county or other constituent society shall not amend or change the same, contrary thereto. The Council shall, upon application, issue similar charters to other societies of physicians, otherwise qualified to become members of a county society and of this Association, where by reason of geographical or other conditions county organizations are not feasible or calculated to promote the best interests of the profession or of the public. Said district or constituent societies shall in like manner be organized to conform to the letter and spirit of the Constitution and By-Laws, rulings and regulations of this society, and such constituent societies shall not change or amend the same contrary thereto.

Sec. 8. The Council, when the best interest of the Association and profession will be promoted thereby, shall organize district medical societies, and all members of the component county societies, and no others, shall be members in such district societies.

Sec. 9. The Council may promote and cause to be organized societies of medical or premedical students in any approved teaching institution in this State, with such affiliation with this Association and under such control as it shall deem advisable and proper.

Sec. 10. The Secretary, with the written authoriza-

tion of the chairman, may submit any urgent question to the Council by mail ballot.

Sec. 11. The chairman shall annually appoint a committee of two who shall audit the accounts of the Association at least once every month, and who shall have general supervision of all the finances of the Association. Said Auditing Committee shall elect a chairman.

Sec. 12. The Council shall appoint an attorney-at-law in good standing, practicing his profession at San Francisco, to act as general attorney for the Association, and an assistant general attorney practicing his profession at Los Angeles to act as assistant general attorney. The general attorney shall, so far as possible, attend the sessions of the Council and of the House of Delegates and shall generally advise and counsel with the councilors and officers of the Association. The general attorney and assistant general attorney shall have charge of all actions for malpractice against individual members of the Association on behalf of such members whenever their defense is authorized by the Association, through the Council, the Executive Committee or the Secretary thereof.

Sec. 13. In all matters not otherwise provided for in this Constitution and By-Laws, the Council shall be the judicial, legislative and policy-making body of this Association. All questions of more than local importance whether involving interpretation of ethics, definition of policy, decision in controversy, financial, organizational or other matter not provided for by this Constitution and By-Laws shall be referred to the Council for action, and this action shall be binding upon the Association and its constituent member societies, provided that the action by the Council is subject to review by the House of Delegates or by the general referendum.

Sec. 14. The Executive Committee shall consist of the President, the President-elect, the Vice-President of the Association, the chairman of the Council, the chairman of the Auditing Committee, the Secretary, the editor and the general attorney. The committee shall elect its own chairman, and the Secretary shall act as secretary thereof. It shall keep a record of its proceedings and report them to the Council. It shall initiate action, investigate or take charge of all matters in which the welfare and the best interests of the public and the Association are mutually concerned. It shall act in the place of the Council when the latter is not in session, all of its steps and proceedings, however, to be subject to the approval of the Council.

ARTICLE VI

Order of Procedure

The Program Committee shall consist of the Secretary of the Association and four members of the Association who shall be elected by the House of Delegates, one each year to serve for four years. The Secretary of the Association shall be the chairman thereof. It shall determine the character and scope of the scientific proceedings of the Association, subject to the instructions of the Council, and shall provide for and fix the order of business at the sessions of the general meeting, the sessions of the House of Delegates and the sessions of each section.

ARTICLE VII

County Societies

Section 1. Each county and other constituent society of this Association, which has adopted principles of organization not in conflict with the Constitution and By-Laws, rulings and procedures of this Association, shall, on application, receive a charter from and become a component part of this Association. Such charters shall provide that the Constitution and By-Laws and procedures of the constituent member society shall not be amended in any way which might conflict with the Constitution and By-Laws of the American Medical Association and of this Association as originally drawn or as modified by competent authority, except by and with the written approval of the Council of this Association.

Sec. 2. Charters shall be issued only upon approval of the Council or House of Delegates, and shall be signed by the President and Secretary of this Association. The Council or the House of Delegates shall have authority to revoke the charter of any county or other constituent society whose actions are in conflict with the letter or spirit of the Constitution and By-Laws, policies and procedures of this Association.

Sec. 3. Only one component medical society shall be chartered in any one county, provided that the physicians in a portion of any one county who can show adequate reasons satisfactory to the Council therefor may be authorized to join a constituent district society as elsewhere provided for in this Constitution and By-Laws.

Sec. 4. Each county or other constituent society shall judge the qualifications of its own members. However, as such societies are integral parts of this Association and the basis of membership in the American Medical Association, it is necessary that the qualifications meet the minimum requirements of the State and national organizations. These minimum requirements are that to be eligible for election as an active or inactive member the applicant must hold the degree of doctor of medicine from an accredited medical school for active membership and must be licensed to practice medicine and surgery in the State of California. He must not practice or claim to practice or lend his support, co-operation or

in any other way endorse any exclusive system of medicine or any person practicing the same. He shall be honorable and ethical in his conduct and shall subscribe to the principles of medical ethics of the American Medical Association, and shall recognize the Council of this Association as the proper authority to interpret any doubtful points about ethics. Every applicant for membership in a component society shall fill out and sign in duplicate the application blanks provided by the Society which prescribe the necessary qualifications for membership. One copy of each such application shall be promptly forwarded to the office of the State Secretary.

Sec. 5. Any physician who may feel aggrieved by the action of the society of his county in refusing him membership, or in suspending or expelling him, shall have the right to appeal to the Council within three months, and if the decision of the Council be questioned, an appeal may be taken to the House of Delegates, whose decision in any case shall be final.

Sec. 6. In hearing appeals the Council may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 7. When a member in good standing in a component society moves to another county or other jurisdiction in this State, his name, on request, shall be transferred, without cost, but upon assuming such financial obligation as shall be deemed proper by the component society to which transferred.

Sec. 8. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, provided that the consent of the society of the county in which such physician may reside be first obtained, and also the consent of the society which he desires to join.

Sec. 9. The Secretary of each component society shall keep a roster of its members and of the non-affiliated registered physicians of the county, on which shall be shown the full name, address, school and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note and at once notify the State Secretary of any changes in the personnel of the profession, by death or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year. The Secretary of each component society shall make a monthly report to the Secretary of the Association upon forms and including such subjects as the Council shall authorize.

Sec. 10. The Secretary of each component society shall forward its assessments, together with its roster of officers and members, list of delegates and alternates and list of non-affiliated physicians of the county to the Secretary of this Association before the first day of March of each year. Only those delegates and alternates who are duly elected and certified to the State Secretary before March 1 shall have the right to represent their society in the House of Delegates.

Sec. 11. Any county society which fails to pay its assessment or make the report required on or before March 1 shall be held as suspended, and none of its members, delegates or alternates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates during the annual session of that year, nor thereafter, until all requirements for membership have been met.

Sec. 12. No member of a component society shall be deprived of his membership unless by his own act, except by a three-fourths affirmative vote of all the members present at a regular meeting, and after an opportunity has been given for the accused to be heard in his own defense; but a member shall be dropped on the revocation of his certificate by the Board of Medical Examiners of California.

Sec. 13. When a member shall resign his membership in a component society, he shall thereby forfeit all right and title to any share in the privileges and property of the California Medical Association.

Sec. 14. Any county or other constituent society may, in its discretion, create associate members from persons engaged professionally in branches of science allied to medicine but not holding the degree of doctor of medicine. Associate and honorary members of any county or other constituent society are not members of this Association. However, when the constituent society follows the provisions of the State Association in its inactive and associate membership provisions, such associate or inactive members of constituent societies may be elected to corresponding position in the State Association membership by the Council.

ARTICLE VIII

Miscellaneous

Section 1. The principles of medical ethics of the American Medical Association are adopted as the ethics of this Association and are made part of the charter provisions for constituent societies. Interpretation of points in ethics about which there may be any controversy shall be submitted to the Council of the State Association for ruling, and this ruling shall be final and authoritative, provided the House of Delegates by vote may ratify the action of the Council.

Sec. 2. New members who join a component society

after July 1 shall pay only one-half the regular annual assessment for such fiscal year.

Sec. 3. The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, when not in conflict with this Constitution and By-Laws.

ARTICLE IX

Amendment to By-Laws

Section 1. The House of Delegates is authorized to amend any article or section of the By-Laws by a three-fourths affirmative vote of the delegates present; provided, that such amendment has been submitted in writing and laid on the table for twenty-four hours previous to being voted upon.

Sec. 2. The Constitution and By-Laws heretofore governing this Association are hereby repealed, and this Constitution and By-Laws shall be in full force and effect immediately after it is declared duly adopted.



TRAVERS SURGICAL CO.
SAN FRANCISCO

An Efficient and Inexpensive Device for Cutting Bandage Rolls—The Travers Surgical Company have perfected a simple device which enables one to cut bandages any desired size with edges clean and even. As a time saver it is of much value. There are no threads clinging to the bandages. This device is very compact and portable, as it weighs but a few pounds. The use of this bandage cutter eliminates the necessity of carrying a large stock of bandages of assorted sizes, thereby creating a big saving, as the difference in cost of the yard bandage roll and ready-cut bandages is considerable. The many advantages of the Klean Edge Bandage Cutter can be readily seen.

Troy Laundry Machinery Company Move Their Factories—The Troy Laundry Machinery Factories have been moved from Chicago to East Moline, Ill. All of the manufacturing departments of this great company are now in operation in one center. The factories cover eighty-three acres consisting of fourteen buildings grouped around an administration building and a factory office. Hospitals interested in laundry machinery make no mistake with dealing with the Troy Laundry Machinery Company.

COUNTY NEWS

ALAMEDA COUNTY

Alameda County Medical Society (reported by C. L. McVey, secretary)—The Society met on August 21; E. E. Brinckerhoff, president; C. L. McVey, secretary. The scientific program consisted in a discussion of brain injuries. Howard Naffziger of San Francisco presented the subject as (a) clinical classification of brain injuries according to pathological findings; (b) description of a new group of cases amenable to surgical treatment; (c) the interpretation of pressure signs and the indications for surgical treatment. O. D. Hamlin, J. H. Buteau, C. A. Dukes and M. L. Emerson took part in the discussion. The revised constitution and by-laws were adopted.

BUTTE COUNTY

Enloe Hospital Temporarily Closed—It is reported that the three head nurses of Enloe Hospital left the institution suddenly. As a result of this action, it has been necessary to close the hospital for all but emergency work for a period of ten days or two weeks. The physicians of the community are co-operating to keep the hospital operating until a new staff of nurses can be secured. The nurses who resigned are: Miss Margaret Brown, Miss Adalaine Wildman and Miss Marie Joachims.

GLENN COUNTY

Willows Sanitarium—This hospital, owned by Etta Lund, M. D., has just issued an annual report. During the year 105 operations were performed and a large number of all classes of medical cases were treated. The hospital is equipped with Brahamhall-Deane sterilizer and has other facilities for doing safe work.

KERN COUNTY

Alice Cooper Memorial Hospital—Mr. Chester Conklin is constructing a sanitarium, particularly for patients suffering from tuberculosis, on his four hundred acre ranch located in the Horseshoe Valley of the Mojave Desert about one hundred miles from Los Angeles. Mr. Conklin is spending a considerable amount of money to make this sanitarium attractive and has secured the services of Doctor John T. Bernard as medical director.

LOS ANGELES COUNTY

William Day Moore, M. D., Health Officer of San Pedro, has resigned in order to give his entire time to his private practice.

MARIN COUNTY

Marin County Medical Society (reported by C. A. DeLancey, secretary)—The Society held a business meeting on the last Thursday of July, the principal subject being the Fee Schedule as adopted by the Council.

Dr. C. A. DeLancey has resigned from the State Prison at San Quentin, where he has held the position of assistant physician, in order to go into private practice in San Anselmo. Dr. Northrop succeeds Dr. DeLancey at the prison.

Presbyterian Orphanage at San Anselmo—The Presbyterian Orphanage at San Anselmo, which was burned to the ground several months ago, is being rapidly reorganized. The new organization will consist of cottage units. Dr. Blatry, the superintendent, expects that three of these cottages will be ready for occupancy before December. Medical attention is rendered gratis by the physicians of the County.

SAN DIEGO COUNTY

Meeting of Council of San Diego County Medical Society (reported by Geo. B. Worthington, secretary)—Applications of Drs. Chas. E. Howard and W. A. Alton for membership by transfer were considered by the council, and on motion these applicants were elected to membership.

The industrial medicine blanks received from thirty-two physicians were presented to the Council for approval. On motion the secretary was instructed to forward the completed blanks to the State secretary with a clause relative to the Society's opinion as to individual competency in the different lines of work unsigned, and further instructed the secretary to notify the State secretary that while the Society felt competent to certify as to the individual's standing and membership in the County unit, it considered it impracticable to definitely certify as to competence in any indicated subject.—Bulletin of San Diego County Medical Society, July 21, 1922.

Early Days of the San Diego County Medical Society—There seems to be evidence that an attempt was made in 1880 and again in 1886 to start a San Diego County Medical Society, but both seem to have run a short course owing to jealousies existing among the physicians of those days. The present County Medical Society was started at a meeting held early in 1887.—Fred and Charlotte Baker, in the Bulletin of the San Diego County Medical Society, July 21, 1922.

Elwyn Sanitarium—W. D. Rolph, M. D., has associated himself with Dr. E. S. Coburn of National City in the conduct of the Elwyn Sanitarium, which will continue to be operated as an open staff general hospital.—The Bulletin, San Diego County Medical Society, July 21, 1922.

SAN FRANCISCO COUNTY

New Director Bureau of Hygiene, California Board of Health—Dr. Ellen S. Stadtmuller of this city has been appointed director of the State Bureau of Hygiene to fill the vacancy left by the resignation of Dr. Ethel M. Watters. Dr. Stadtmuller is a graduate of the University of California Medical School, and has practiced medicine in San Francisco since 1912. The State Board of Health, coincident with accepting the resignation of Dr. Watters, accepted also that of Miss Mary K. Clary, a public health nurse. The action of the board was taken at the conclusion of a probe into alleged irregularities in the filing of expense claims by the two women, whose dismissal was recommended by the State Board of Control several weeks ago.—S. F. Examiner, July 3, 1922.

Medical Social Workers—The California Association of Medical Social Workers met at "tea" at one of the hotels August 4. Dr. Richard Cabot of Boston led a discussion on case work and case records—the social service exchange and pay clinics.

Academy of Medicine—The Academy of Medicine met at dinner on August 26, and was addressed by Richard Cabot, M. D., of Boston.

SAN MATEO COUNTY

Alexander Sanitarium—The Alexander Sanitarium, for the care of patients suffering from nervous and mental disorders, has recently completed a new and modern physiotherapy department at a cost of \$18,000. This sanitarium, located twenty-two miles south of San Francisco, in the foothills near Belmont, California, and near the California Tuberculosis Sanitarium, accepts patients of any licensed physician and surgeon.

SANTA BARBARA COUNTY

Santa Barbara County Medical Society (reported by A. C. Soper, secretary)—The July meeting was held in the Cottage Hospital on July 10 with thirteen members and three guests present. Walter M. Dickie, M. D., secretary of the State Board of Health, presented a paper with graphic charts

showing mortality and morbidity rates of the State, with particular reference to contagious diseases, dating from 1906, when the first fairly accurate records began to be made. Discussion was general by members present. Lloyd Mills, M. D., of Los Angeles, read a paper on "Modern Cataract Surgery," discussed by G. W. Jean and L. R. Ryan. Jesse P. Truax, of Lompoc, was elected to membership. The secretary reported correspondence with Drs. Dickie and Mills, Edwin I. Bartlett, and the League for the Conservation of Public Health. Application cards to the League were signed by H. F. Pierce, O. C. Jones, and G. W. Jean. Censors were reminded that it will be their duty to pass on the questionnaires for industrial medicine practice.

Santa Maria Hospital Plans Progressing—It is reported that earnest work is being carried forward looking to the building and maintenance of a hospital in Santa Maria. Among those interested in this important problem are: Dr. Coblenz, Dr. Brown, Mrs. H. E. Easton, Mrs. George Scott, E. D. Rubel, A. McNeill, L. P. Scaroni.

Improvements in Orcutt Hospital—It is reported that Dr. C. D. Dickey has provided extensive improvements in the Orcutt Hospital. It is reported that this hospital is owned by Drs. French and Early, of Los Angeles.

SANTA CLARA COUNTY

Santa Clara Medical Society (reported by E. P. Cook, secretary)—The regular meeting of the Society was held July 19, 1922, at the Oaks Sanitarium, Los Gatos, with an attendance of twenty-five members. Robert P. Gober and Paul C. Alexander were elected to membership. The scientific meeting was conducted by Dr. Voorsanger, who discussed recent advances in the treatment of tuberculosis. Heliotherapy and the method of performing artificial pneumothorax were demonstrated. C. M. Richards read a paper on the X-ray diagnosis of pulmonary tuberculosis, stressing the importance of the Roentgenologist as a medical consultant. Appreciation was voiced of Doctor Voorsanger's hospitality. Refreshments were served after the adjournment of the meeting.

STANISLAUS COUNTY

Oakdale Hospital Bond Issue Fails to Carry—The proposition to vote \$35,000 for bonds to erect a municipal hospital in Oakdale was defeated by a vote of 141 to 76.

TUOLUMNE COUNTY

Tuolumne County Medical Society (reported by W. L. Hood, secretary)—The May meeting of the Tuolumne County Medical Society was a public meeting held in the opera house. Dr. Hirshfelder of Belmont Sanitarium addressed the meeting. The important public health problem of "campers along the streams" in Tuolumne County was considered by the Society. The Society went on record as being in favor of more and better paid health officers.

Hospital Facilities of Tuolumne County—Hospital facilities for the people of Tuolumne County are: County Hospital at Sonora, sixty beds for male patients and twenty for females; Bromley Sanitarium at Sonora, private sanitarium of ten beds, owned by R. I. Bromley, M. D., and open to all physicians; Sierra Hospital, twenty-four beds, owned by E. T. Gould, M. D., at Sonora; Tuolumne Hospital, fifteen beds, owned by E. H. Reid, and located at Tuolumne.

Hetch-Hetchy Hospital Destroyed by Fire—The hospital used for the care of employees on the Hetch-Hetchy water supply proposition for San Francisco was destroyed by fire recently. There were twenty-nine patients in the hospital at the time, and only by heroic work were their lives saved. Nurse Ethel Moyer lost her life as a result of burns received while moving patients from the

hospital. After removing the last patient, Mrs. Moyer, with her clothing afire, jumped from the second story of the hospital and suffered a broken back. A movement is under way to commemorate the sacrifice made by Mrs. Moyer by the erection of the Ethel Moyer Memorial Hospital on the ground previously occupied by the hospital that was burned.

YOLO COUNTY

Yolo County Medical Society (reported by Lela J. Beebe, secretary)—The quarterly meeting of the Society was held in the County Court House, Woodland, June 20. Present: Bates, Beebe, Blevins, F. R. Fairchild, King, Keith, Lawhead, Lawson, Newton, and Ward. Absent: Craig, Desrosier, C. H. Fairchild, Goffin, McManus, Parsons, and Poage. H. D. Lawhead made a delegate's report on the 1922 State Medical Society meeting. Charles Keith presented a paper on the diagnosis and medical aspects of cholecystitis. F. R. Fairchild discussed the diagnosis and surgical aspects of cholecystitis. The papers were followed by a general discussion participated in by all members present. The secretary was instructed to write to President-elect Thomas Clay Edwards, a former Yolo County man, conveying to him the congratulations of this society on the signal honor conferred upon him.

The Higher Education of Chiropractors—What is your favorite light literature? Detective stories? Mystery stories? Humor? Have you ever read the publications issued by the various species and sub-species of the chiropractic cult—for there is, as you know, a lack of unanimity among the chiropractors. One particularly choice piece of contemporary journalism is issued by a chiropractor factory in Fort Wayne, Indiana. Its July (1922) issue makes good hot weather reading. The editor discusses a "model bill," recently drawn up by those chiropractors of Indiana who belong to a different sub-species from those represented by the publication in question. This Fort Wayne journal views the bill with disfavor. It says, with refreshing naivete:

"To begin with there is absolutely no need of a chiropractic licensing and examining board in Indiana today. The existing lot of chiropractors in Indiana cannot be improved upon. You are not being persecuted or prosecuted, you are left severely and strictly alone to practice your profession without any let or hindrance from any source or any group of any kind. In fact, Indiana today is the best chiropractic state in the entire country. Chiropractic conditions are as near ideal as it is humanly possible to approach that condition."

But the fact that Indiana is the home of the free, chiropractically speaking, is not the only objection this journal has to the proposed bill. It seems that the bill would require applicants for chiropractic examinations to submit satisfactory proof of the possession of a preliminary education, equal to that of a high school. Perish the thought! As the editor says:

"How many chiropractors in Indiana today could qualify under that rule? Of all the chiropractors in Fort Wayne, I do not happen to know one that is a high school graduate. In fact, I believe that the total number in Indiana able to comply with that ruling would be less than two per cent of all the chiropractors in the state."

From the point of view of the owner of a chiropractic "college" the sentiments just quoted are eminently logical. It would be entirely unfair to chiropractic schools to insist on matriculants being educated human beings. What educated human being would ever attend a chiropractic school? Of course, from the point of view of public interest—but that's another story.—*Journal of A. M. A.*, July 15, 1922.

BUSINESS AND THE BUSY PHYSICIAN

Why not let our advertisers help you?

Banking and Investments—It is one thing to have a large gross income. It is quite another matter to convert a large percentage of this income into net profits. The most difficult of all business ventures is to make money make money within the bounds of reasonable safety for the original investment.

The fixed charges or "overhead" expenses of physicians are, as a rule, higher in proportion to volume of income than for any other class of citizens. With social conditions as they are, the factors that produce this extra burden will continue operative and consequently the net earned dollars of physicians are small in proportion to their incomes. Realization of these conditions should make physicians conservative and particularly careful as to the safety of their earnings and (particularly careful as to) their investments.

In order to be of as much assistance as possible to our members in business, as well as in professional affairs, the executive committee approves the policy of advertising safe banking and investment houses who are willing to give advice to physicians by personal visit or by correspondence. In this issue will be found the advertisements of three banks and trust companies. They are:

Union Trust Company, Market street and Grant avenue, San Francisco.

The San Francisco Savings and Loan Society, 526 California street, San Francisco.

Anglo-California Trust Company, Market and Sansome streets, San Francisco, with branches at Market, McAllister and Jones, Mission and Sixteenth, Fillmore and Geary, 101 Market, Third and Twentieth, and branch offices of the bond department at 210 Syndicate Bldg., Oakland, and 1112 Pacific Mutual Bldg., Los Angeles.

These are all reliable, conservative institutions which are ready not only to protect your funds but to give you in a personal, confidential way the expert advice regarding investments that they would expect you to give them regarding health.

A Relief From Office Worries—A fortunate few physicians have so complete an office organization as to enjoy relief from the annoying, yet nevertheless important, details of the business side of practice. However, to the greater number this is a problem.

Realizing the difficulty the majority are confronted with in this regard, two local business women, Gail Sheridan and Mary Downing, have organized a complete visiting secretarial and accounting service, whereby small offices as well as large ones may be maintained in a thorough, modern and efficient manner.

The bane of many a physician's existence is the collection of his accounts, and the service offered by Miss Sheridan and Miss Downing embraces a tactful and systematic method for the collection of accounts. In addition, the service embraces the skillful handling of correspondence and accounting, installation of accounting systems, keeping of checking accounts and bank balances in order, and the preparation of income tax returns.

The many years' experience of Miss Sheridan and Miss Downing in important executive and secretarial positions in San Francisco office organizations specially equip them for the handling of business requiring confidence and trust. Their program and credentials have had serious consideration by the officers of the Medical Society. Their announcement appears on page 42 of the

advertising section, and their plans and methods have the endorsement of the Journal.

Gas and Oxygen—Hospitals and physicians are interested in gas and oxygen exactly as they are interested in drugs, instruments or any other substance in the practice of medicine and public health. Legitimate interest concerns itself in any of these products essentially in quality, price, adequacy of supply and the ethics of marketing.

There are several sources of gas and oxygen in California. There are also several prices, some variation in qualities and quite a variation in the ethics of marketing.

The Journal with this issue carries an advertisement of the Western Nitrous Oxide Company, one of the latest firms to enter the market in California. As in all other advertisements, the Journal has considered carefully for several months the methods and policies of this company before accepting their advertisement. They have complied with all the requirements made by the State Society, and their copy appears in this issue.

Comments regarding the product of this company, as well as upon the general question of the supply of anesthetics for hospitals, will be welcomed by the Council of the Medical Society.

PACIFIC COAST ASSOCIATION OF ANESTHETISTS

Joint Session With the Section on Anesthesiology of the California State Medical Society, Yosemite Valley, May 15-16, 1922

Minutes First Scientific Session

George P. Waller, President of the Pacific Coast Association of Anesthetists, called the meeting to order for the first scientific program, May 16, in the Hotel Sentinel, Yosemite village.

After preliminary announcements by the chair concerning transportation and entertainment, F. H. McMechan, Honorary Secretary of the Pacific Coast and Secretary of the American Association of Anesthetists, was introduced as the guest of the Association and recognized leader among anesthetists. In a few well chosen words Dr. McMechan expressed his pleasure at being present and commended the progress made by the organization in so short a time. In token of his appreciation and as a memento from Mrs. McMechan and himself, he presented to the Association, through Eleanor Seymour and George P. Waller, a beautiful silver mounted gavel engraved with the names of the first president and secretary, to which succeeding ones shall be added. After acknowledging the gift of the general secretary the following program was presented:

1. Spasticity from Inflammation in Relation to Anesthesia. (President's address.) Dr. George P. Waller, Los Angeles. Discussed by Doctors Botsford, Palmer and Wilson.
2. Anesthesia and Its Relation to the Patient, from a Surgeon's Standpoint; Type of Anesthesia in Relation to Existing Pathology; Emoluments to the Anesthetist. Harlan Shoemaker, M. D., secretary Los Angeles County Medical Society. Discussed by Doctors Huggins, Botsford, Wilson, Seymour and McMechan.
3. Sacral Anesthesia—A New Method of Administration with Report of Use in Four Hundred Urologic and Gynecologic Cases. Albert J. Scholl, Jr., Mayo Clinic, Rochester, Minn. Discussion by Doctors Robert Day, Harlan Shoemaker, Mary Botsford and F. H. McMechan.
4. Suggestive Leads in Anesthesia. F. H. McMechan, M. D., secretary American Medical Editors'

Association. Discussed by Doctors Waller and Crane.

Omitted because authors were detained—Time as an Element of Safety in Anesthesia in Children. Mary T. Murphy, M. D., San Francisco.

The Heart in Surgery. E. E. Fisher, M. D., Salem, Oregon.

Executive Session.

After the completion of the scientific program, the president called the members to order for a brief business meeting.

A charter roll of sixty names was read and all having been duly passed upon by the executive board were unanimously elected to membership.

There followed the reading of the organization meeting during the session of the State Medical Society at Coronado Wednesday, May 12, 1921. Minutes adopted as read.

On behalf of the executive board the following resolutions were presented by the secretary and each adopted in turn:

Resolutions Adopted.

1. Be it resolved that the Pacific Coast Association of Anesthetists hereby extends its hearty appreciation of the splendid efforts of the State Board of Medical Examiners and their legal advisers in interesting themselves in protecting of the public health and welfare by limiting the administration of anesthetics to legally qualified physicians.
2. Be it resolved that the Pacific Coast Association of Anesthetists hereby extends its hearty appreciation of the splendid efforts of the League for the Conservation of Public Health, its officers and legal advisers in interesting themselves in the protecting of public health and welfare by limiting the administration of anesthetics to legally qualified physicians.
3. Whereas the safety of those coming to operation under anesthesia is a paramount issue in public health work, be it resolved that the Pacific Coast Association of Anesthetists hereby urges the Health Department of San Francisco to eliminate nursing anesthesia and the dangers attaching thereto, by introducing the administration of anesthetics by expert medical anesthetists in the San Francisco City and County Hospital and providing adequate funds for such purpose.
4. Resolved that Dr. F. H. McMechan be instructed to extend the greetings of the Pacific Coast Association of Anesthetists to the Canadian Association of Anesthetists at Winnipeg in June and to the joint meeting of the Interstate, Research and World's Congress in Columbus in October, 1922.
5. Resolved that Dr. Eleanor Seymour be instructed to extend the greetings of the Pacific Coast Association of Anesthetists to the joint meetings of the American Association of Anesthetists, Mid-Western, and the Anesthesia session of the American Medical Association in St. Louis the week of June 22, 1922.
6. Resolved that the Pacific Coast Association of Anesthetists, appreciating the influence of the International Congress of Medicine, on the advancement of anesthesia, hereby appoints Dr. Mary E. Botsford as official representative to the section on anesthesia, to convey its compliments and carry its scientific message to the London Meeting in 1923.
7. Whereas the protection of the patient be advancement of surgery and the development of hospital service demand the administration of anesthetics by qualified physicians, therefore be it resolved that the Pacific Coast Association of Anesthetists urges the American College of Surgeons through its members and hospital standardization to eliminate the nurse technician and to confine the administration of anesthetics exclusively to physicians.

The next order of business was the presentation

of the seal specially designed and artistically executed by Mrs. Neil C. Trew, wife of the incoming president of the Southern California Society of Anesthetists. After admiring inspection, the design was accepted and a rousing vote of thanks extended Mrs. Trew for her artistic creation. The motto suggested by Dr. McMechan, "Divinum est sedere dolorem"—"It is God-like to relieve pain," was also unanimously adopted.

Election of officers then followed and the ticket as proposed by the nomination committee was unanimously endorsed, as follows:

Officers Elected.

George P. Waller, M. D., Los Angeles, Cal., president; Mary E. Botsford, M. D., San Francisco, Cal., vice-president; Eleanor Seymour, M. D., Los Angeles, Cal., secretary-treasurer; Walter R. Crane, M. D., Los Angeles, Cal., executive board, 1924; David E. Hoag, M. D., Pueblo, Colo., executive board, 1924; M. J. Rand, Elko, Nev., executive board, 1925; Robert L. Charles, M. D., Denver, Colo., executive board, 1923; Caroline B. Palmer, M. D., San Francisco, Cal., executive board, 1925; Louise A. Oldenbourg, M. D., Oakland, Cal., executive board, 1923.

It was moved, seconded and carried that a cordial invitation be extended to the American Medical Association and its session on Anesthesia, and to the American Association of Anesthetists to hold a joint session with the Pacific Coast Association of Anesthetists in San Francisco in June, 1923. Adjourned.

Scientific Program Continued.

May 16

1. Ethyl Chloride as a General Anesthetic. Louise A. Oldenbourg, M. D., Oakland. Discussed by Doctors Walker, Botsford and Crane.

2. Physiological Effects of Nitrous Oxide. Neil C. Trew, M. D. Discussed by Doctors Botsford, Bunnell and Crane.

3. Symposium on Intratracheal Anesthesia. Mary Kavanagh, M. D., and Edith Williams, M. D. (The latter read by Dr. Botsford.) Demonstration of apparatus and general discussion.

Omitted.

Anesthol, a Most Useful Anesthetic Mixture. Louis H. Maxson, M. D., Seattle, Washington. (Unable to be present.)

Nitrous Oxide Anesthesia in Infants. Mary E. Botsford, M. D., San Francisco. (Points Previously covered in discussion.)

At the close of the program and before adjourning, Dr. McMechan exhibited photos of the cups to be presented to James T. Gwathmey and Isabella Herb for distinguished work in the specialty of anesthesia. Dr. McMechan also extended congratulations on the success of the initial P. C. meeting and pledged the co-operation of all the regional organizations.

Dr. Botsford then moved a vote of sincere thanks for the inspirational visit of Dr. McMechan, general secretary, and for his extensive contributions to anesthesia literature, as the efficient editor of several publications. Adjourned to June 26, 1923. Eleanor Seymour, M. D., secretary.

American Roentgen-Ray Society—The annual meeting of this national association will be held in Los Angeles, September 12 to 17, under the presidency of Albert Soiland.

Many members of our State Society and others will be in Pasadena for the Hospital Convention to be held at the Maryland Hotel, September 5, 6, 7 and 8. Why not plan to spend an additional week in Los Angeles and attend the meetings of the American Roentgen-Ray Society? There is no more delightful place anywhere than Southern California in September.

Write to Dr. Soiland, 1407 S. Hope street, Los Angeles, and you will receive a cordial invitation to the meeting.

Pharmacology and Therapeutics

Edited by FELIX LENGFELD, Ph. D.

Help the propaganda for reform by prescribing official preparations. The committees of the U. S. P. and N. F. are chosen from the very best therapeutists, pharmacologists, pharmacognosists and pharmacists. The formulae are carefully worked out and the products tested in scientifically equipped laboratories under the very best conditions. Is it not plausible to assume that these preparations are, at least, as good as those evolved with far inferior facilities by the mercenary nostrum maker who claims all the law will allow?

Evans Cancer Cure—Dr. R. D. Evans, of Brandon, Manitoba, sells a "positive cure for cancer." The price is "one hundred dollars in advance." The victim who parts with \$100 for this cruel and worthless fake is told to shave a patch about the size of a silver dollar on the crown of the head. The "cure" is applied to this spot. This is for the treatment of internal cancer. "For 'external cancer' the discovery is applied on the spot." From an analysis made in the A. M. A. Chemical Laboratory, it was evident that Evans Cancer Cure is essentially a mixture of 1 part of a fatty substance (such as lard) and 5 parts of dried ferrous sulphate.—*Journal A. M. A.*, June 3, 1922, p. 1739.

The Intravenous Use of Acacia—It is now generally accepted that acacia has a limited and uncertain usefulness. The intravenous use of acacia is a recent therapeutic procedure, and apparently sufficient time has not elapsed for the thorough appraisal of its use as a therapeutic remedy. Bearing in mind the accidents from the use of acacia that have been reported, the lack of agreement as to its beneficial effects among surgeons who have tried it, the experimental evidence that has been reported as to its deleterious effects and the paucity of data indicating its clinical usefulness, conservative practitioners will still withhold their verdict. Moreover, the questions of intravenous therapy, which are involved in any discussion on the use of acacia in shock, hemorrhage and allied conditions, are an important and serious complicating consideration.—*Journal A. M. A.*, June 17, 1922, p. 1897.

Therapeutic Uses of Yeast—If the medical profession will assist in educational work, patent medicine exploitation of the public in the name of vitamins will undoubtedly fail. Quite a few new yeast products and other so-called vitamin extracts are being put on the market, but, on the whole, the public is not using them, and the advertising seems to be a failure. However, the matter seems sufficiently grave for the State Board of Health to issue warning to the effect that ordinary diet contains enough and more than enough vitamin for all practical purposes, and that vitamin extracts are largely inert. In the few cases in which vitamin is indicated, the vitamin carrier, like Cod Liver Oil, orange juice should be used, and no attempt made to concentrate.

Laxatives—Untoward Effects of Laxatives—Lately a number of instances of cutaneous manifestations due to the use of phenolphthalein as a laxative drug have been brought to the attention of physicians, particularly by dermatologists. Now Underhill and Errico have demonstrated that when magnesium sulphate, sodium sulphate and potassium and sodium tartrate are administered experimentally in doses capable of producing diarrhea, a distinct concentration of the blood may take place. The fact that purgatives exert a definite influence, in the direction of concentrating the blood, indicates that care should be exercised in the administration of purgatives in disease conditions, especially in those conditions known to be responsible for concentrated blood. Blood concentrated to some extent, and yet not sufficiently concentrated to be dangerous in itself, may reach a dangerous concentration by the added influence of the purgative.—*Journal A. M. A.*, June 24, 1922, p. 1964.